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Pennsylvania
SURVEYS ITS PUBLIC
SCHOOL FACILITIES

BULLETIN 110

COMMONWEALTH OF Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
HARRISBURG · 1954

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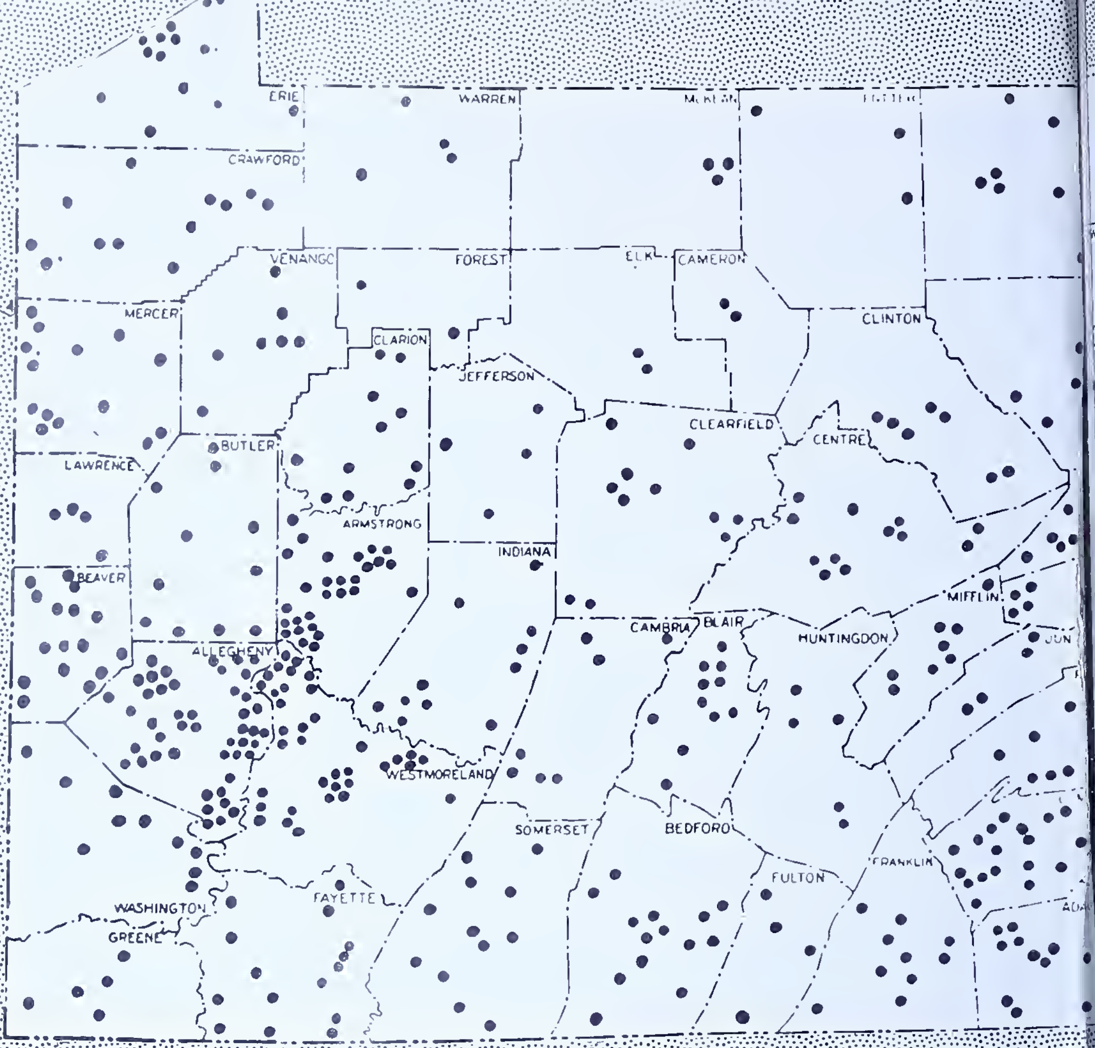
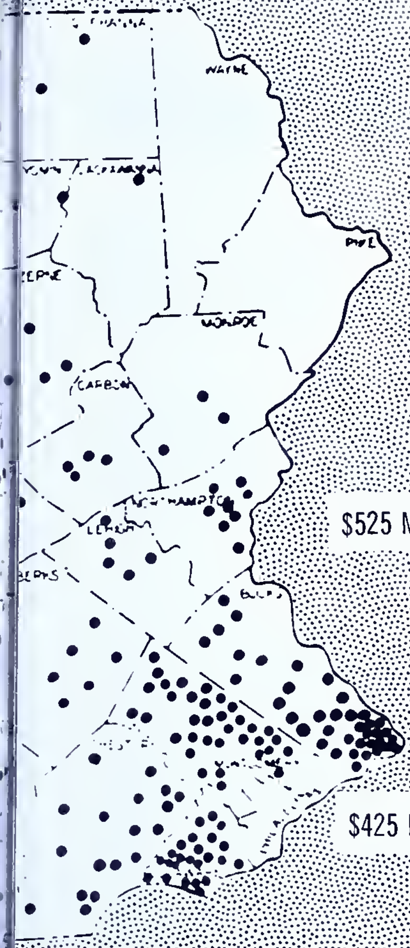


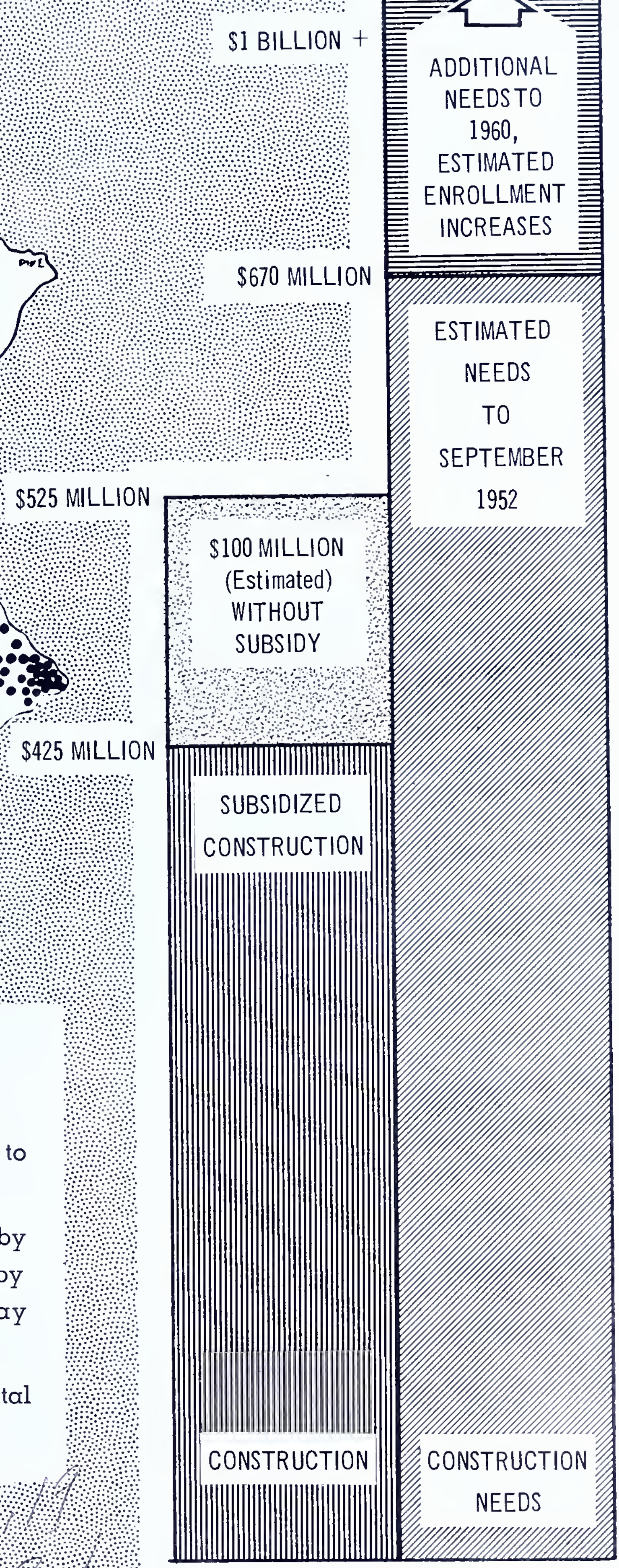
Progress In School Building

The graph to the right indicates Pennsylvania's estimated needs for reha
be a total of $670 million as of September, 1952, as revealed in the Scho

The map above shows the approximate location of construction proj
September, 1953. Before 1955 it is expected that the $425 million limitatio
the Commonwealth will be reached. (See graph.) In the same period
reach $100 million. (See graph.)

Additional facilities needed to house increasing enrollments from
need to $1 billion or more.





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PENNSYLVANIA SURVEYS ITS
Public School
FACILITIES

Bulletin 110

COMMONWEALTH OF PENNSYLVANIA
Department of Public Instruction
Harrisburg • 1953

FOREWORD

This bulletin presents a summary of the first phase of the School Facilities Survey. Title 1 of Public Law 815, enacted by the 81st Congress, provided funds on a matching basis to the States to make a survey of publicly owned school facilities. The purposes of the School Facilities Survey are: (1) to provide a nation-wide survey of the school plant situation, (2) to reveal additional school construction needed in order to house the increasing school population and provide for expanding educational programs, (3) to ascertain financial resources available for meeting additional school plant requirements, and (4) to determine the gap between needs and available resources. The 1951 General Assembly of Pennsylvania provided an initial appropriation sufficient to underwrite Pennsylvania's participation in the survey throughout the period of the present biennium.

This bulletin describes the present status of the school facilities in Pennsylvania. The summary information contained herein is based on data collected for the 1951-52 school year; the estimates of needs are those existing as of September, 1952. The Second Phase of the Survey will develop a master plan for school plant construction in Pennsylvania according to existing and contemplated satisfactory administrative units and suitable school centers serving logical attendance areas. The needs to 1960 will be projected in that plan.

This bulletin has been prepared under the general direction of Raymond W. Robinson, Chief, Consolidation and Transportation, and the immediate supervision of Harold F. Martin, Coordinator, School Facilities Survey. Appreciation is expressed to William A. Yeager, University of Pittsburgh, for a leading part in preparation of the bulletin.

Rachel S. Turner, Editor for the Department of Public Instruction, has been responsible for editing.

April, 1954

Francis B. Haas

Superintendent of Public Instruction

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Valuable assistance given by the Advisory Committee throughout the planning stages of the School Facilities Survey is gratefully acknowledged. The personnel of the committee follows:

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PENNSYLVANIA SURVEYS ITS PUBLIC SCHOOL FACILITIES

Part 1

The School Facilities Survey—a Nation-wide Study

Title I, Public Law 815, provided an appropriation of three million dollars for grants-in-aid to the states for a School Facilities Survey. These Federal funds have been allotted to the states according to school age population, and states are required to match Federal funds with state funds and/or services.

The School Facilities Survey was designed to provide: (1) an extensive inventory of existing public school facilities; (2) a study of the current needs for new construction; (3) an estimate of the availability of state and local resources to finance needed new construction; and (4) the development of a ten-year master plan for school plant construction and improvement. The first phase of the Survey was planned to include an inventory of every public school plant in each of the participating states. Using its inventory as a guide, each state was to estimate the useful future life of each plant relative to the length of time during which it should be continued in use.

After this had been determined, each state was requested to estimate new school plant construction needed by September, 1952, and the amount of funds necessary to provide such construction, either in new plants or in remodeled or rehabilitated structures.

Needs beyond September, 1952, will be included in the Second Phase or long-range part of the Survey. Whereas June, 1953, was originally set as the target date for reporting Phase II findings to the U. S. Office of Education, it is realized that many states, Pennsylvania included, must undertake considerable study and promotion to improve school district reorganization if a projection of school plant needs to 1960 is to be realistic. In order to encourage adequate planning at the state level, no terminal date was placed in Public Law 815.

The Survey Gets Underway in Pennsylvania

The amount of Federal funds allocated to Pennsylvania was $195,160. The 1951 session of the Pennsylvania General Assembly provided the sum of $60,000 to be used as a partial matching of the Federal funds. It was felt that this sum, together with certain services already available in the Department of Public Instruction, would be sufficient to operate during the remainder of the biennium. While the School Housing Section of the United States Office of Education assumed responsibility for coordinating the nation-wide survey, the actual responsibility for conducting the School Facilities Survey in each state rested on the state's education agency. Consequently the Superintendent of Public Instruction appointed in November, 1951, a Coordinator of the School Facilities Survey to conduct the Survey in Pennsylvania. The Coordinator and his staff serve under the general supervision of the Director, Bureau of School Administration, and the immediate supervision of the Chief, Division of Consolidation and Transportation. An Advisory Committee[1] was appointed to assist in formulating plans for the Survey in Pennsylvania and to act in an advisory capacity to the Coordinator.

While specific data on school facilities were required by the Commissioner of Education, the procedure to be followed in collecting the Survey information was not prescribed to the states. The Department of Public Instruction felt that certain additional information beyond the national requirements should be secured because of its pertinency to any survey of the school building situation in Pennsylvania.

Due to the extent of the undertaking, one of the first tasks was to devise reporting forms, on which to collect the raw data, that would be adaptable to machine tabulation. These forms had to include also provisions for recording information regarding school transportation practices, policies, and costs desired by the Joint State Government Commission. They were tentatively mimeographed and tested in a Pilot Study embracing three counties, and then refined before the final printing.

---

[1] Comprised of representatives from the following groups: County Superintendents, District Superintendents, Pennsylvania State Education Association, Pennsylvania School Directors Association, State Teachers Colleges, and the Joint State Government Commission. See Acknowledgments, page iv.

Prior to the undertaking of the actual survey, the Superintendent of Public Instruction acquainted county and district superintendents with the creation of the new agency in the Department of Public Instruction and gave a brief description of the task to be accomplished. The Coordinator presented the purpose and an outline of the School Facilities Survey at the state-wide meeting of county and district superintendents in February, 1952, at the annual state-wide Education Congress of school administrators, and at various county institute meetings of teachers and administrators.

Six Area Survey Supervisors were appointed to the survey staff to complete the two phases of the study. After a brief training period in the field, these supervisors assumed charge of their territories and planned regional meetings with school executives to outline the Survey in detail and explain the procedures to be followed. Such meetings were arranged in cooperation with each county superintendent and generally included the chief administrative officer of each school district under the county superintendent's supervision. In some instances district superintendents participated in the county-wide meetings; in others, separate conferences were held for the district superintendents in the adjacent areas. Approximately 100 such group meetings were held throughout Pennsylvania by the area supervisors.

Area headquarters were opened at several of the State Teachers Colleges when the college proved to be a focal point for the area supervisor. The office of the county superintendent served as the central collection point for the inventory forms for each county. This plan enabled the area supervisor to check and correct the forms on the spot and reduced considerably the necessity for further correspondence and field trips. It was found necessary in some instances to arrange a follow-up program at the local level to increase accuracy in the reporting of data. As the inventory forms were received, they were checked by the area supervisors in an effort to detect misinterpretations or possible errors. Final corrections were made on the basis of additional information secured from local school districts and the forms were then coded for machine tabulation.

The two first class school districts, Philadelphia and Pittsburgh, completed the inventory in summary form similar to that used to report the state-wide findings to the U. S. Office of Education. This procedure eliminated the need for extensive tabulation for these two districts. The information was incorporated with that of the second, third, and fourth class school districts when the final summary was completed.

Forms Used in Survey in Pennsylvania

Five different forms were used in collecting the data from second, third, and fourth class districts:

> **Form A**—School District Report was completed by each school district in the State, regardless of whether it actually operated any schools. This report contained financial, enrollment, and transportation data as well as the estimate of needs regarding necessary rehabilitation and remodeling, new construction, and additional sites for that school district.
>
> **Form B**—School Plant Report was completed for each school plant other than a one- or two-room elementary school. This report dealt with the site, and the building or buildings at a given location.
>
> **Form C**—School Building Report was completed for each supplemental or other than "main" building in a school plant.
>
> **Form D**—One- or Two-Room Elementary School was filled out for each such building.
>
> **Form E**—Individual School Bus Report Card—Transportation data for each individual school bus was recorded by means of a special card designed for machine tabulation.

General Instructions accompanied each set of inventory forms so that interpretation of terms would be more nearly uniform. As a further aid to quick identification, each form was a different color.

The School Facilities Survey in Pennsylvania

1.

NEED FOR THE SURVEY

NEED for a nation-wide School Facilities Survey has been evidenced in recent years by the number of estimates which have appeared in publications concerning the school housing problem. Incomplete surveys indicate that the nation is faced with the most critical shortage of school facilities in history. Accurate figures have not been available regarding the status of and need for building facilities. Numerous factors have contributed to the crisis in school housing: high wartime and postwar birth rates, extensive population shifts, material shortages, inflated construction costs, school building obsolescence, school district reorganization and consolidation, and expanding programs.

Increasing enrollments and expanding educational programs alone have far outdistanced school plant construction. Even after the school building boom of the 1920's, and the public works program of the 1930's, there remained a shortage of school space. During the war years, school construction all but stopped; even regular maintenance programs were neglected because of limitations of both material and manpower. The net result is that thousands of buildings are still in service which otherwise would have been replaced, and many buildings have been allowed to deteriorate through neglect or postponement of needed repairs.

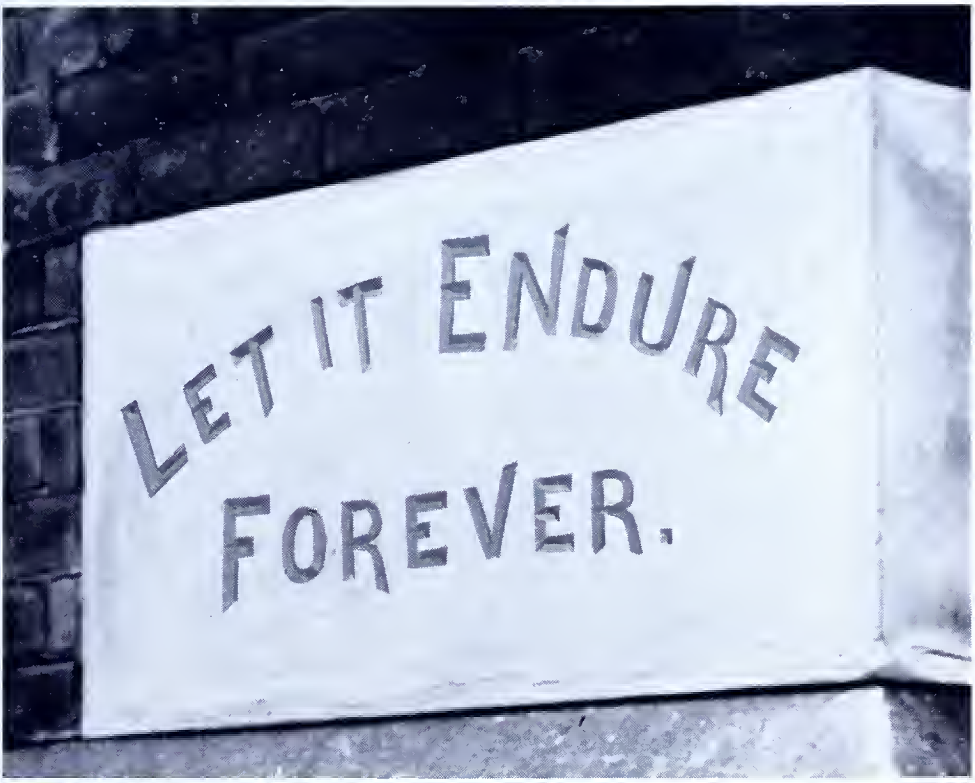
The birth rate in Pennsylvania increased so sharply during and after World War II that there will be approximately 2,071,600 children in school in 1960 as compared to 1,597,548 in 1952, according to the latest estimates of Dr. Carl D. Morneweck, Chief, Child Accounting and Research, Department of Public Instruction. This means that we will need 12,000 or more teachers in addition to the 64,000 we now have. There are now about 55,000 classrooms throughout the State; on the basis of 1960 estimates over 15,000 classrooms must be added.

This report is taken from the findings of the Inventory. The basic data were tabulated by county and class of school district. Space prohibits the listing of all information in this bulletin by these classifications; however, specific information concerning each county and school district in the State is recorded in the School Facilities Survey Office, Department of Public Instruction, Harrisburg. The estimate of needs for new construction, as revealed by this summary, shows an accumulation of needs already existing in September, 1952. It is not a projection beyond that date.

Every effort was made to promote accuracy and uniformity in reporting throughout the State. Despite the efforts made to maintain uniform interpretation of terms and definitions, as explained in the Introduction, the Inventory has the usual limitations of a study of this size, involving as it does many people. For example, numerous examinations of the ratings of school plants indicate that such ratings as a general rule are too conservative in terms of the applied definitions. This may be due to several factors: (1) reluctance on the part of school administrators to rate buildings *Fair* or *Unsatisfactory* because of an implied belief that such ratings would have adverse reflections upon themselves; (2) application of the rating criteria to the structural soundness of the building without regard for its adaptability to the type of educational program housed; and (3) undue caution regarding the reaction of the public to a poor rating should it become public knowledge. In spite of these acknowledged shortcomings, it is believed that the Inventory provides far better and more complete estimates upon which to base school building needs in Pennsylvania than have previously existed.

The estimates of need for new construction, remodeling, and rehabilitation of school plants in Pennsylvania, as revealed by this Survey, are conservatively stated. Examination of a sampling of the reports indicates that the estimates of need represents the minimum essentials necessary to provide additional classrooms and to rehabilitate those now in existence, if today's educational needs are to be met. The needs are based upon estimates as of September, 1952.

The urgent need for new classrooms in Pennsylvania increases the danger that construction may be undertaken without adequate preliminary study. Inasmuch as new school buildings are constructed infrequently, many boards of school directors and school administrators have limited experience in the problems involved. For that reason, it becomes imperative that maximum use of all avenues of assistance toward careful study and planning be utilized. The second or long-range phase of the School Facilities Survey will emphasize the stimulation of more careful planning at the local level with some suggestions as to how such planning may be done.



THE CORNERSTONE OF A SCHOOLHOUSE

SCHOOL BUILDINGS ARE TEMPORAL. Their usefulness dwindles with physical onslaught of the seasons and the changing demands of our culture.

IDEAS ARE AGELESS. Planted in the human mind, they live and grow until the end of time.

2.

GENERAL CHARACTERISTICS OF PUBLICLY OWNED SCHOOL PLANTS

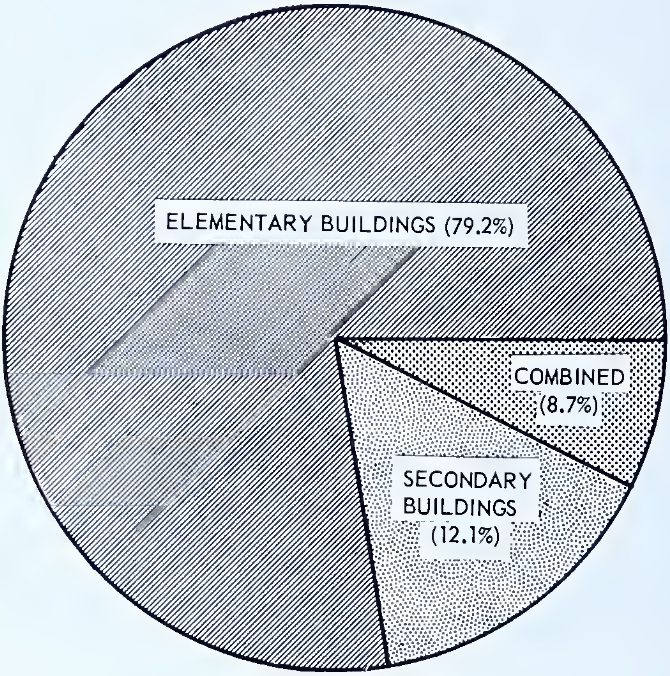
THIS section of the School Facilities Survey is concerned with an analysis of school plants as they existed in Pennsylvania as of September, 1952. The term "school plant", as contrasted with "school building", is the larger term and may include more than one building on a given site. Several factors contribute to the existing school plant: (1) school plants and school buildings, (2) number of stories and number of pupils housed, (3) types of construction and number of pupils housed, and (4) age of school buildings. These will be discussed in turn.

School Plants and School Buildings

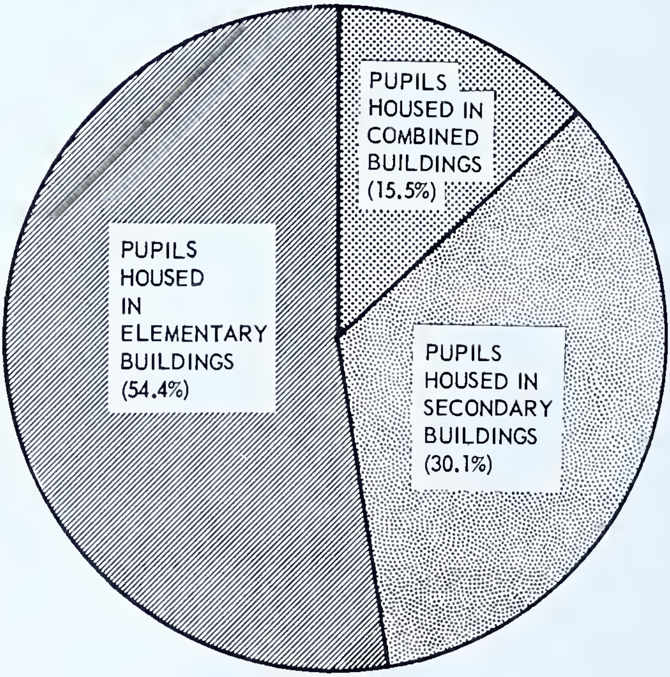
There is in Pennsylvania a total of 6,855 school plants which include 7,461 school buildings. Of these 7,461 school buildings, as in-

CHART A

Per Cent of School Buildings in Pennsylvania and Pupils Housed in Them



ALL SCHOOL BUILDINGS



PUPILS HOUSED BY BUILDINGS

dicated in Table 1 (below) and CHART A (Page 8), 5,911 or 79.2 per cent house elementary children; 12.1 per cent house secondary children; and 8.7 per cent, both elementary and secondary children.

While four out of five are elementary buildings, these buildings house only 54.4 per cent of all pupils. Of the remainder, the secondary school buildings, representing one out of eight, house 30 per cent of all pupils. The 650 combined elementary and secondary buildings house 15 per cent of all pupils. The disproportionate ratio of elementary school buildings to pupils housed is accounted for, in part, by the larger number of one- and two-room elementary buildings.

In examining tables and charts throughout this Bulletin which refer to school plants and school buildings, the reader should bear in mind that as shown in Table 8, Page 23, one-room buildings account for a substantial portion of the total number of buildings and plants but a relatively small number of pupils.

TABLE 1

NUMBER AND DISTRIBUTION OF SCHOOL PLANTS AND SCHOOL BUILDINGS, WITH PUPILS HOUSED

	Number of Plants	*Per Cent*	*Pupils Housed*	*% of Pupils Housed*
Elementary ...	5,642	82.3	841,475	55.6
Secondary	685	10.0	445.263	29.4
Combined	528	7.7	226,895	15.0
Totals	6,855	100.0	1.513.633	100.0
	Number of Buildings	*Per Cent*	*Pupils Housed*	*% of Pupils Housed*
Elementary ...	5,911	79.2	875,509	54.4
Secondary	900	12.1	482,618	30.1
Combined	650	8.7	248,922	15.5
Totals	7,461	100.0	1,607,049	100.0

Number of Stories and Pupils Accommodated

The proper housing of pupils has always been an important consideration in their education. The original public school was a one-story structure frequently placed on a very inadequate site and poorly adapted for either educational or recreational purposes. The land was often donated by the owner because it did not lend itself well to agriculture, the main industry of the time.

As the population of the area grew, and building expansion ha to be considered, the restricted site frequently dictated the desig of school buildings of more than one story. Examination of buildings built as late as the 1920's shows that, of buildings with mor than one room, two- and three-story structures became typical i Pennsylvania.

Despite the fact that many of these old buildings remain in dail use, they, like the covered bridges of a past generation, are disappearing rapidly. What are left contrast strikingly with the presen trend toward rambling, one-story structures, with modern ventilatin systems and toilet facilities, centrally located on ample, well-landscaped grounds, and providing for all-weather recreation, hot dail lunches, and community activities after school hours.

TABLE 2 shows that slightly over half (54.1 per cent) of all schoo buildings in Pennsylvania are of the one-story type, about one i three are two-story structures, and one in eight three stories or more It is interesting to note the tendency to revert to one-story structure in new construction, particularly for elementary children. Fou out of five elementary children are now housed in one-story structures which include all one-teacher buildings.

TABLE 2

School Buildings by Number of Stories and Per Cent of Pupils Housed

	One-story Buildings		*Two-story Buildings*		*Three-or-more stories*	
	Number Buildings	*Pupils Housed*	*Number Buildings*	*Pupils Housed*	*Number Buildings*	*Pupils Housed*
Elementary ..	3.721	78.6%	1,684	55.1%	506	40.0%
Secondary ...	177	17.3%	429	24.5%	294	46.9%
Combined ...	140	4.1%	391	20.4%	119	13.1%
Totals:	4,038	100.0%	2,504	100.0%	919	100.0%
Per cent:	54.1%		33.6%		12.3%	100.0%

Types of Construction and Pupils Housed (Table 3 and Chart B opposite)

Safety is a factor of extreme importance in the construction o school buildings. Since two out of three school buildings now in us were constructed more than thirty years ago, many of them wer constructed at a time when the safety factor was not uppermos in the minds of the builders. Since fire is one of the chief hazard an analysis has been made which reveals the construction of schoo buildings from this point of view. Table 3 and Chart B show tha

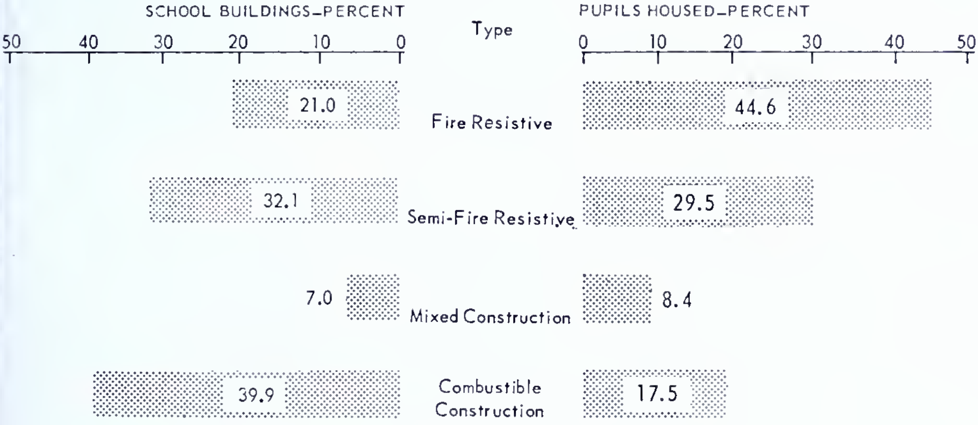
TABLE 3

Types of Construction of School Buildings and Per Cent of Pupils Housed

	Fire-Resistive	*Semi-Fire-Resistive*	*Combustible*	*Mixed*	Totals
Elementary					
Number of Buildings .	972	1,848	2,696	395	5,911
Number of Pupils Housed	315,937	262.710	221,429	75,433	875.509
Per cent of Pupils Housed	19.7	16.3	13.7	4.7	54.4
Secondary					
Number of Buildings .	425	283	146	46	900
Number of Pupils Housed	316,106	113,291	27,789	25,432	482,618
Per cent of Pupils Housed	19.8	7.1	1.7	1.6	30.2
Combined					
Number of Buildings .	169	266	138	77	650
Number of Pupils Housed	82,205	98,418	34,182	34.117	248.922
Per cent of Pupils Housed	5.1	6.1	2.1	2.1	15.4
Totals:					
Number of Buildings .	1,566	2,397	2,980	518	7,461
Number of Pupils Housed	714,248	474,419	283.400	134,982	1.607.049
Per cent of Pupils Housed	44.6	29.5	17.5	8.4	100.0
Per cent of all Buildings by Types of Construction	20.99	32.13	39.94	6.94	100.0

CHART B

Types of Construction of School Buildings and Pupils Housed



about one out of five of all school buildings in Pennsylvania is fire-resistive. What is most revealing is that two out of five school buildings are combustible and constitute a constant fire hazard to the pupils housed in them. Fortunately, nearly half (44.6 per cent) of all pupils in Pennsylvania are housed in fire-resistive buildings. Of great significance, too, is the fact that, of the 2,980 school buildings of combustible construction, 766 are two stories or more in height and accommodate 174,218 pupils (See statistics below). The distribution of all these pupils housed by types of school construction according to elementary and secondary groups is shown in Table 3 and graphically in Chart B.

Distribution of Combustible Buildings by Stories

The safety factor related to combustible school buildings is vividly revealed in the following analysis of these buildings by number of stories. It will be noted that, out of the 2,980 school buildings rated

School Buildings of	*Number*	*Per Cent*	*Pupils Housed*	*Per Cent*
One story	2,214	74.3	109,182	38.5
Two stories	649	21.8	129,219	45.6
Three stories or more	117	3.9	44,999	15.9
Totals:	2,980	100.0	283,400	100.0

as combustible, about three out of four are one-story, about one out of five (21.8 per cent) are two-story, and 117 (3.9 per cent) are three stories or more in height. However, it is significant to note that these 117 three-story-or-more buildings house 44,999 pupils or 15.9 per cent of the total in combustible buildings. Nearly half of the total number of pupils are housed in two-story school buildings. Thus these pupils are subject to a constant safety hazard which in many instances may be difficult to correct.

Age of School Buildings (See illustrations on pp. 14, 15, 16 & 17)

The ordinary life of a school building is estimated to be about fifty years. This means that school buildings fifty years old have outlived their usefulness and are probably not adapted to a modern educational program. Moreover, the cost of maintenance and rehabilitation is not economical in the long run. Chart C and Table 4 are most revealing in pointing out the age of school buildings and the great lag in the construction of school plants in Pennsylvania over the

CHART C

Age of School Buildings and Pupils Housed

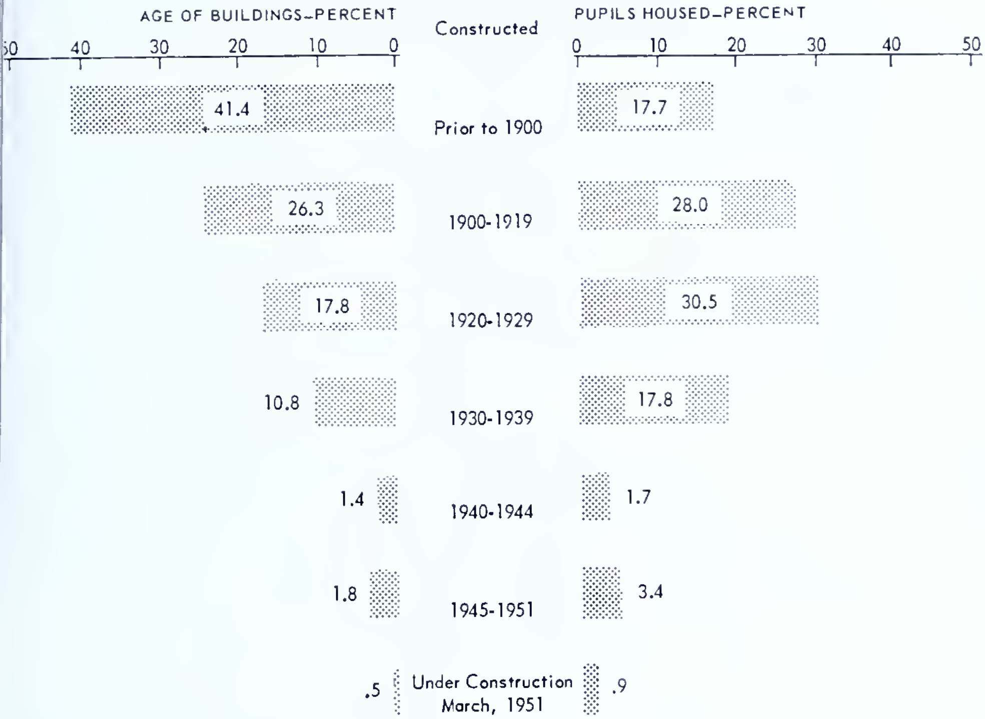


TABLE 4

Age of School Plants and Number of Pupils Housed

	Constructed Prior to 1900	*1900-1919*	*1920-1929*	*1930-1939*	*1940-1944*	*Since 1945**	TOTALS
Elementary Plants	2,750	1,495	784	436	72	130	5,667
Pupils Housed .	231,526	256,174	193,141	107,028	15,507	47,474	850,850
Secondary Plants	43	166	272	172	19	18	690
Pupils Housed .	17,708	109,652	192,003	105,738	8,737	14,535	448,373
Combined Plants	60	148	174	136	5	8	531
Pupils Housed .	21,152	61,676	80,193	59,190	2,248	3.867	228,326
Total Plants .	2,853	1,809	1,230	744	96	156	6,888
Total Pupils ..	270,386	427,502	465,337	271,956	26,492	65,876	1,527,549
Per cent of Plants by age.	41.4	26.3	17.8	10.8	1.4	2.3	100.0
Per cent of Pupils in Plants by Age of Plants	17.7	28.0	30.5	17.8	1.7	4.3	100.0

* Includes buildings under construction March, 1951

↑

1 PER CENT OF PENNSYLVANIA'S SCHOOLS ARE MORE THAN 50 YEARS OLD

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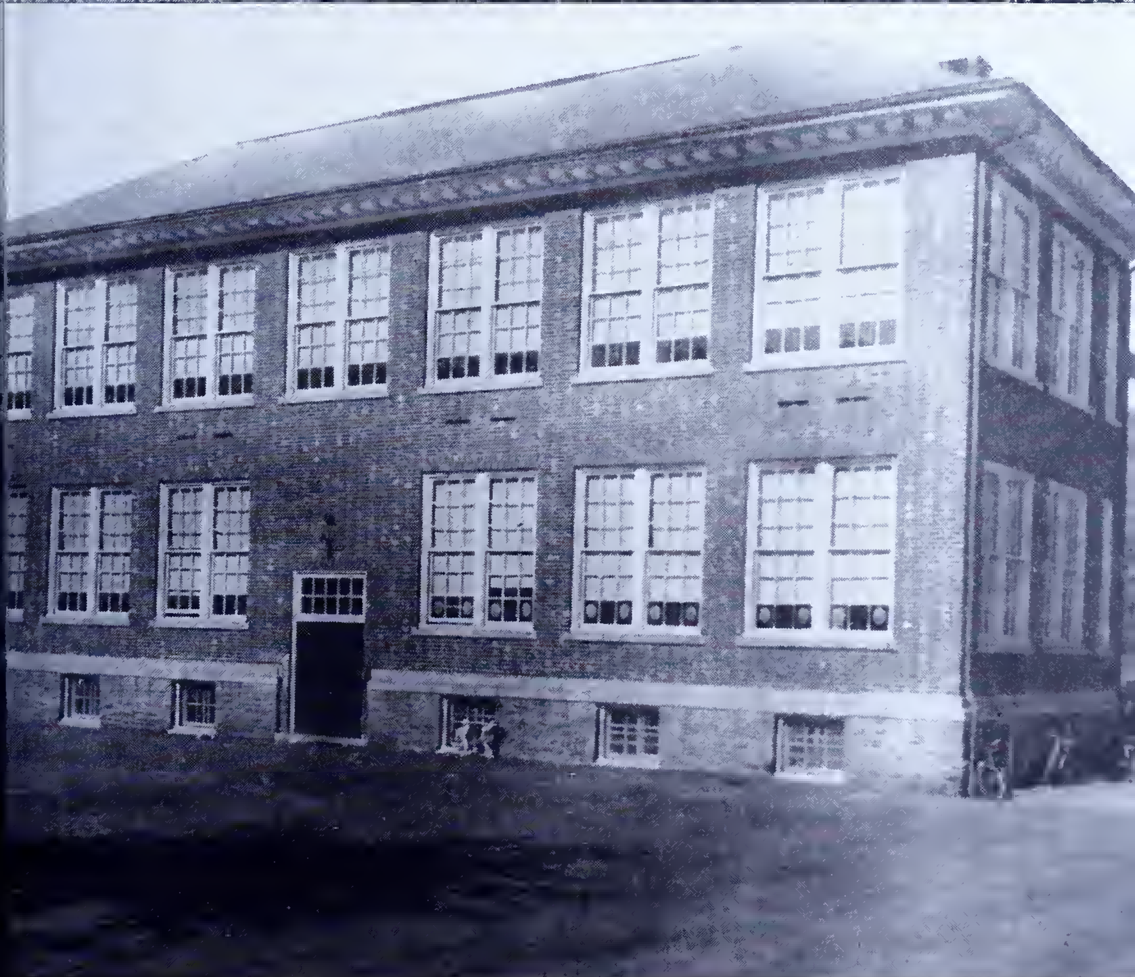
86 PER CENT OF THE SCHOOL BUILDINGS IN PENNSYLVANIA ARE 25 OR MORE YEARS OLD



years. Two out of five school buildings now in use were constructed before 1900 and are now more than fifty years old. These buildings accommodate about eighteen per cent of all school children in the Commonwealth.

Chart C and Table 4 (Page 13) show that almost 86 per cent of all school plants were constructed more than 25 years ago. The chart shows the great lag in school building construction. Pennsylvania's school buildings are old and many of them are obsolete. We have not kept pace with the modernization program as some would like to believe. Only 252 school plants, or less than 4 per cent of the total plants now in use, have been constructed or are under construction in the thirteen years since 1940. Of the 2,853 school plants constructed prior to 1900, 1,699 were one-room and 290 were two-room buildings. (See Table 5, Page 19.)

The ratio of pupils now accommodated in school buildings according to age of school plants is shown in Table 4. For example, 17.7 per cent of all pupils are attending school in buildings constructed prior to 1900. If we add all pupils attending schools constructed prior to 1930, we find a total of 76.2 per cent, more than three-fourths of all pupils, attending schools in buildings constructed more than twenty-five years ago. These facts further emphasize the great need for more school construction in Pennsylvania in order to modernize the educational program.

The period of construction of one- and two-room school buildings is shown in Table 5. The large majority of these structures are now over a half-century in age, although it is interesting to observe that a few have been constructed since 1930. It should be pointed out that plans are being made to abandon one- and two-room schools in many cases as rapidly as other facilities can be provided.

Of 2,635 such buildings reported, plans were being made at the time of the report to abandon 234 (8.9%) by 1952; 444 (16.8%) by 1953; 296 (11.2%) by 1955; and the remainder (63.1%) as soon as other facilities can be provided. Thus, the nearly one hundred thousand pupils housed in these one- and two-room buildings seem assured of modern school facilities within a reasonably short period of time.

TABLE 5

CONSTRUCTION OF ONE-ROOM AND TWO-ROOM ELEMENTARY SCHOOL BUILDINGS BY PERIODS

Period	*One-room*	*Two-room*	*Total*	*Per cent*
Prior to 1900	1,699	290	1,989	70.8
1900-1919	402	183	585	20.8
1920-1929	69	85	154	5.5
1930-1939	28	34	62	2.2
1940-1944	7	6	13	.5
Since 1945	0	7	7	.2
Totals	2,205	605	2,810	100.0

3.

SCHOOL SITES

Much attention has been given in recent years to the size and location of school plants. Sites selected in past generations do not measure up to modern standards of sufficient acreage for play areas and natural settings. A study of acreage of Pennsylvania school plants is indicated in Chart D and Table 6, page 21, with school sites in terms of size and in relation to pupils accommodated. Table 6 points out that over half (52.2 per cent) of all school buildings in Pennsylvania are located on sites of less than one acre of ground, accommodating at the same time 30 per cent of all pupils. An additional 27.6 per cent of school buildings are located on areas of less than three acres. Approximately nine out of ten school buildings (88.6 per cent), accommodating about 75 per cent of all pupils, both elementary and secondary, have sites of less than five acres. Thus the play area for most of the school children of the Commonwealth is small indeed.

As a matter of fact, there are only 136 school sites of fifteen acres or more, 42 of which are over 25 acres, and 12 over fifty acres.

CHART D

Area of School Sites with Pupils Accommodated

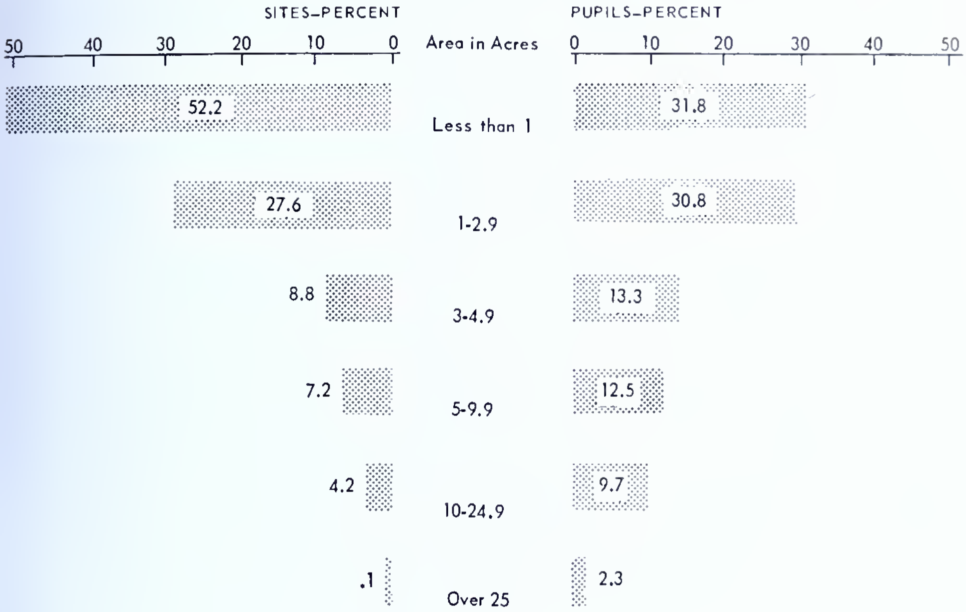


TABLE 6

Number and Area of School Sites with Pupils Accommodated

	Less than One Acre	*1-2.9 Acres*	*3-4.9 Acres*	*5-9.9 Acres*	*10-24.9 Acres*	*Over 25 Acres*	*Total*	*Per Cent*
Elementary								
Sites ..	3,259	1,582	419	269	100	13	5,642	82.3
Pupils .	347,363	282,262	98,584	76,849	33,234	3,183	841,475	
Secondary								
Sites ..	179	157	92	114	111	32	685	10.0
Pupils .	79,998	118,752	71,069	71,724	76,889	26,831	445,263	
Combined								
Sites ..	127	144	78	102	68	9	528	7.7
Pupils .	54,130	58,687	31,203	41,042	36,294	5,539	226,895	
Total								
Sites ..	3,565	1,883	589	485	279	54	6,855	100.0
Pupils .	481,491	459,701	200,856	189,615	146,417	35,553	1,513,633	
Per cent Sites .	52.2	27.6	8.8	7.1	4.2	.1	100	
Per cent Pupils	31.8	30.4	13.3	12.5	9.7	2.3	100	

TABLE 7

Play Area in Relation to Number of Pupils Per Acre

Number of Schools (all types)

Play Area of Site in Acres	*Less than 50 Pupils Per Acre*	*50-99.9 Pupils Per Acre*	*100-250 Pupils Per Acre*	*Over 250 Pupil Per Acre*
Less than one acre	1,480	648	735	702
1-2.9	751	367	437	328
3-4.9	218	194	137	40
5-9.9	255	162	60	8
10-14.9	129	59	9	—
15-24.9	62	17	2	1
25-50	40	2	—	—
Over 50	11	—	—	—
Total—Schools	2,946	1,449	1,380	1,079

The unequal and inadequate distribution of play space for pupil is vividly pointed out in Table 7. This table shows the play are for pupils in relation to number of pupils per acre. In one instance there are 702 schools where 250 or more pupils are required t play on an area of one acre or less. There are 735 schools wher from 100 to 250 pupils must play in a similar area. The table point out similar inequalities. Other data are revealed in Table III Ap pendix, Page 69.

The recommended minimum standard for the size of a schoo site for the elementary school is five acres plus an additional acr for each one hundred pupils of ultimate enrollment. For the sec ondary school, the site should be sufficiently large to provide a mini mum of ten acres plus an additional acre for each one hundre pupils of ultimate enrollment. It is obvious that play areas fo Pennsylvania's school children are far below these minimum stand ards.

4.

CLASSROOMS

We now turn our attention from the exterior characteristics of the school plant, to the characteristics of the interior. The classroom is the focal point around which the work of the school is planned. Table 8 below and Chart E, page 24, show a distribution of all school plants by number of classrooms. Six classifications are indicated, ranging from plants of one classroom to those having over twenty classrooms. About one in three of the 6.855 school plants (See Table 8) have but one classroom. Eleven per cent have from two to three classrooms. If we include all those with six classrooms or less there are 3,972 such plants, or nearly sixty per cent. This vividly indicates that the *typical* school building in Pennsylvania is a small building of less than six classrooms. On the other hand, there are 770 structures (11.3 per cent) with over 20 classrooms, housing over forty-one per cent of all pupils. If those school buildings with 14 rooms or over are included, nearly sixty per cent of all pupils, most of them secondary, attend school in comparatively large school buildings.

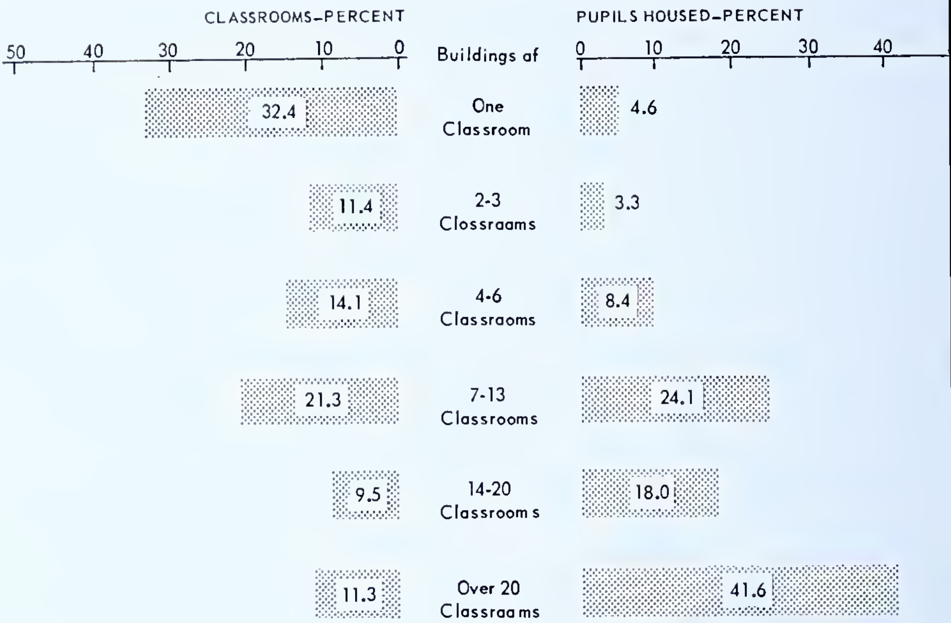
TABLE 8

Distribution of School Plants by Number of Classrooms and Number of Pupils Housed

	Number of Classrooms						
	1-Room	*2-3*	*4-6*	*7-13*	*14-20*	*Over 20*	*Totals*
Elementary							
Plants ...	2,223	772	918	1,129	345	255	5,642
Pupils ..	69,509	49.627	119,258	280,712	144,708	177,661	841,475
Secondary							
Plants ...	—	8	31	127	154	365	685
Pupils ..	—	885	4.602	29.943	64.306	345,527	445,263
Combined							
Plants ...	—	—	20	206	152	150	528
Pupils ..	—	—	3,299	53,604	63.316	106,676	226,895
Totals							
Plants ...	2.223	780	969	1,462	651	770	6,855
Pupils ..	69.509	50,512	127.159	364,259	272.330	629.864	1,513,633
Per cent of Plants ...	32.4	11.4	14.1	21.3	9.5	11.3	100.0
Per cent of Pupils ..	4.6	3.3	8.4	24.1	18.0	41.6	100.0

CHART E

Classrooms in School Buildings in Relation to Pupils Housed



Classrooms by Size and Pupil Load

Many school people think of the standard classroom as 30 or feet long and 22 or 24 feet wide. This modal practice is well ind cated in Table XII, Appendix, page 77, which distributes the si of classrooms by square feet of area. This table shows that 38 per cent of all classrooms studied have between 600 and 700 squa feet of floor area, and 30.0 per cent between 700 and 800 square fee Over 10,600 classrooms (about 20 per cent) may be designated large classrooms and include in some instances large study halls an similar rooms used in part as classrooms. Rooms for special pu poses, as libraries and laboratories, are not included in Table XI About ten per cent of all classrooms (about 4,800) may be desi nated as small classrooms, less than 600 square feet in size.

The pupil load of each classroom provides another measure of i daily use. Of the 48,879 classrooms studied, 36.6 per cent were use by between 21-30 pupils, and about half (47.3 per cent) by betwee 31-40 pupils. The typical classroom in Pennsylvania now appea to accommodate about 31 or 32 pupils. The table points out that the are 3,124 classrooms (6.4 per cent) not now in use in Pennsylvania. This would seem to be an excessive number of unused classrooms; however, it should be realized that these are widely distributed, with many located in below-standard buildings and others unavailable for appropriate use.

Evaluation of Classroom Use

In evaluating school buildings, consideration was given to three groups: (1) those sufficiently satisfactory to continue to serve for 20 or more years, S; (2) those which, by rehabilitating and remodeling, could continue to serve for 10-15 years, F; and (3) unsatisfactory plants which should be abandoned as soon as possible, U.

Considering schools and classrooms as rated satisfactory and fair, groups (1) and (2) above, Chart F below, Table 9, page 26, and Table X, Appendix, page 75, show a distribution of the number of pupils per classroom in different types of schools and classrooms.

CHART F

NUMBER OF PUPILS PER CLASSROOM IN SATISFACTORY AND FAIR SCHOOL PLANTS

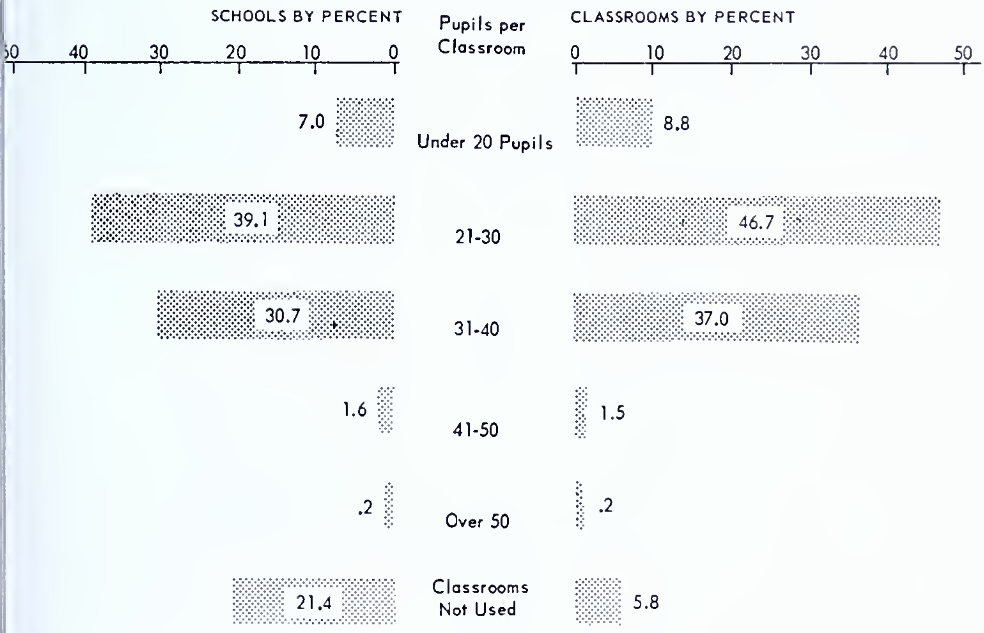


TABLE 9

NUMBER AND PER CENT OF PUPILS IN S AND F SCHOOL PLANTS[1]

	Number of Schools and Classrooms									
Number of Pupils Per Classroom	*Elementary*		*Secondary*		*Combined*		*Total*		*Per Cent*	
	Schools	*Classrooms*	*Schools*	*Classrooms*	*Schools*	*Classrooms*	*Schools*	*Classrooms*	*Schools*	*Classrooms*
Classrooms not used	820	2,679	75	341	40	104	935	3,124	21.4	5.8
Under 20	148	1,438	108	2,507	46	783	302	4,728	7.0	8.8
21-30	1,110	10,492	336	9,934	262	4,602	1,708	25,028	39.1	46.7
31-40	1,027	11,846	173	5,260	143	2,684	1,343	19,790	30.7	37.0
41-50	51	404	11	196	10	154	72	754	1.6	1.5
Over 50	6	54	2	48	2	14	10	116	.2	.2
Total used	2.342	24.234	630	17,945	463	8.237	3,435	50,416	100.0	100.0
Per cent used	68.2	—	18.3	—	13.5	—	100.0	—	—	—
Total used and unused	3,162	26,913	705	18,286	503	8,341	4,370	53,540	—	—
Per cent	72.4	50.3	16.1	34.2	11.5	15.5	100.0	100.0	—	—

---

[1] This Table is based on Table X, Appendix, page 75.

Table 9 shows that, of the satisfactory and fair schools (S and F groups), 72.4 per cent are elementary and house about one-half of the pupils, 16.1 per cent are secondary and house about one-third of the pupils, and 11.5 per cent combined elementary and secondary school buildings accommodate the remaining one-sixth. A further distribution by size of school may be noted in the table.

A study of the classrooms of the satisfactory and fair schools indicates (Table 9) that, of 4,370 schools, there are 935 that contain unused classrooms representing 5.8 per cent of all classrooms in satisfactory and fair schools available for instruction. The table shows the distribution of schools and classrooms by the number of pupils per classroom. As indicated in the table, nearly half of all classrooms in satisfactory and fair schools have from 21-30 pupils per classroom, and an additional 37 per cent have from 31-40 pupils. These figures conform to prevailing practice as to class size. In this table, classrooms include laboratories and shops, while the number of pupils reported refers to the average number assigned daily to these rooms.

Curtailment of Educational Opportunities

Public education is designed to provide adequate education oppo tunities for all children. This implies qualified teachers, a complet educational program, and full daily sessions. A standard school d may be defined as one during which pupils receive a minimum of fiv and one-half hours of continuous instruction, both in classroom and activities, with a period for lunch exclusive of the five and on half hour day. Table 10 shows 79 schools reporting double se sions, a majority being elementary schools. These double session affect approximately 15,000 pupils, about one per cent of the tot school population. While this does not seem excessive, it is r grettable that any child should be denied full educational privilege Five additional schools reported other types of a shortened schoo day involving 1,102 pupils because of lack of space or other factor

Kindergartens, while not mandatory, are a part of the publi school system, and once established should continue in existenc Reports indicate that these opportunities were denied to 33,72 children because of lack of space.

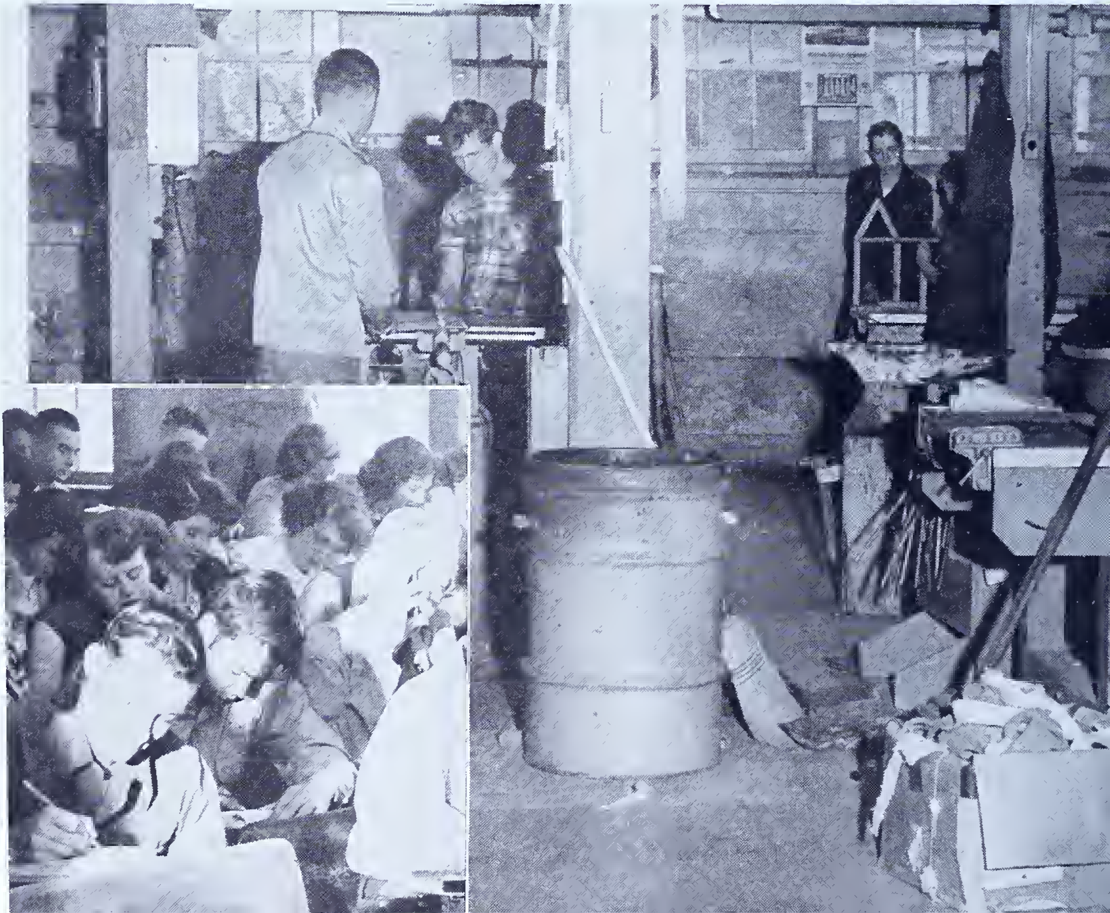
TABLE 10

Denial of Educational Opportunities

Type of School	*Double Sessions*		*Other Forms of Shortened Day*	
	Number of Schools	*Number Pupils*	*Number of Schools*	*Number Pupil*
Elementary	61	10,615	4	802
Secondary	3	604	0	0
Combined	15	3,755	1	300
Total	79	14,974	5	1,102

CROWDED AND SUBSTANDARD FACILITIES DENY ADEQUATE EDUCATIONAL OPPORTUNITIES FOR CHILDREN

CROWDED AND SUBSTANDARD FACILITIES (Continued)



5.

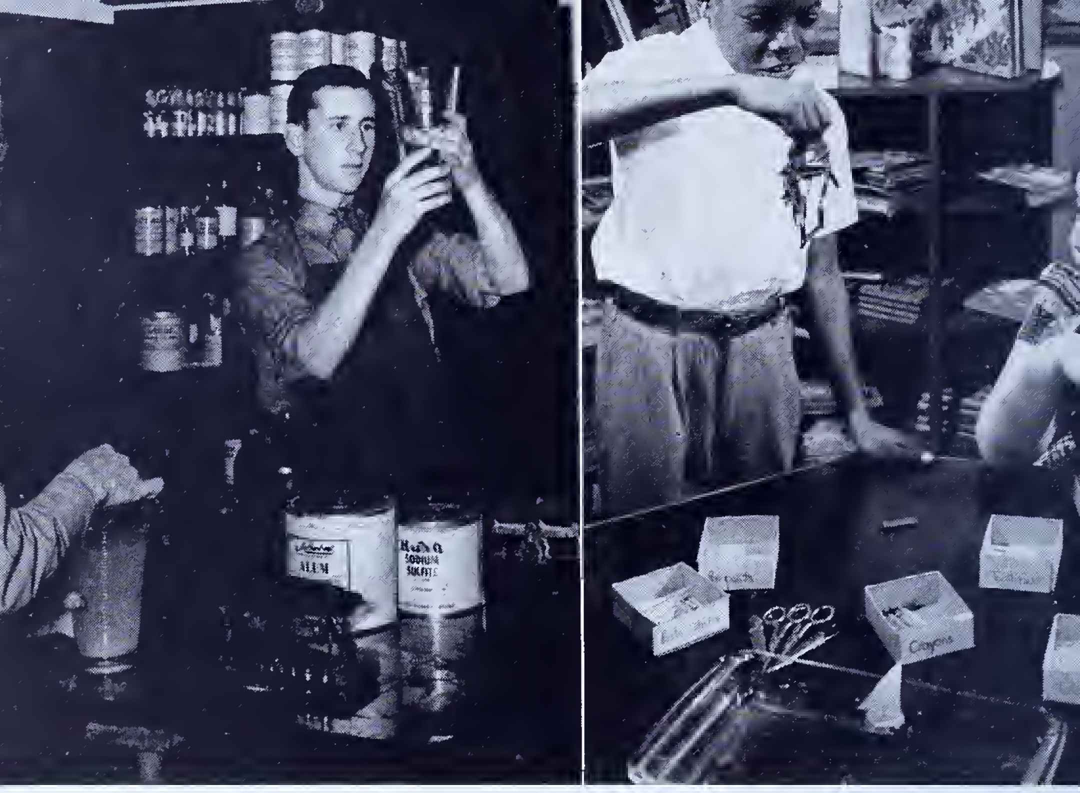
SPECIAL ROOMS

One of the best evidences of an adequate educational program is the provision for special rooms and facilities in which instruction may be better adapted to the interests, needs, and abilities of boys and girls. There are various evidences of these adaptations, analysis of which is indicated in Table II, Appendix, Page 68. This table points out a distribution of the following special instruction rooms: kindergartens, science laboratories, industrial arts and vocational shops, homemaking, art, music, business education, and other types. These facilities are distributed in accordance with their availability for elementary and secondary pupils separately; taking all schools into consideration, roughly about one school in ten provides them. There are 979 schools which house kindergartens, making provision for nearly 29,000 children. As indicated on page 28 the number of children in kindergarten would be more than doubled if additional facilities were available. The availability of other special instruction rooms can be noted in Table II. These data reveal that Pennsylvania is definitely lacking in providing these educational facilities.

General Use Rooms

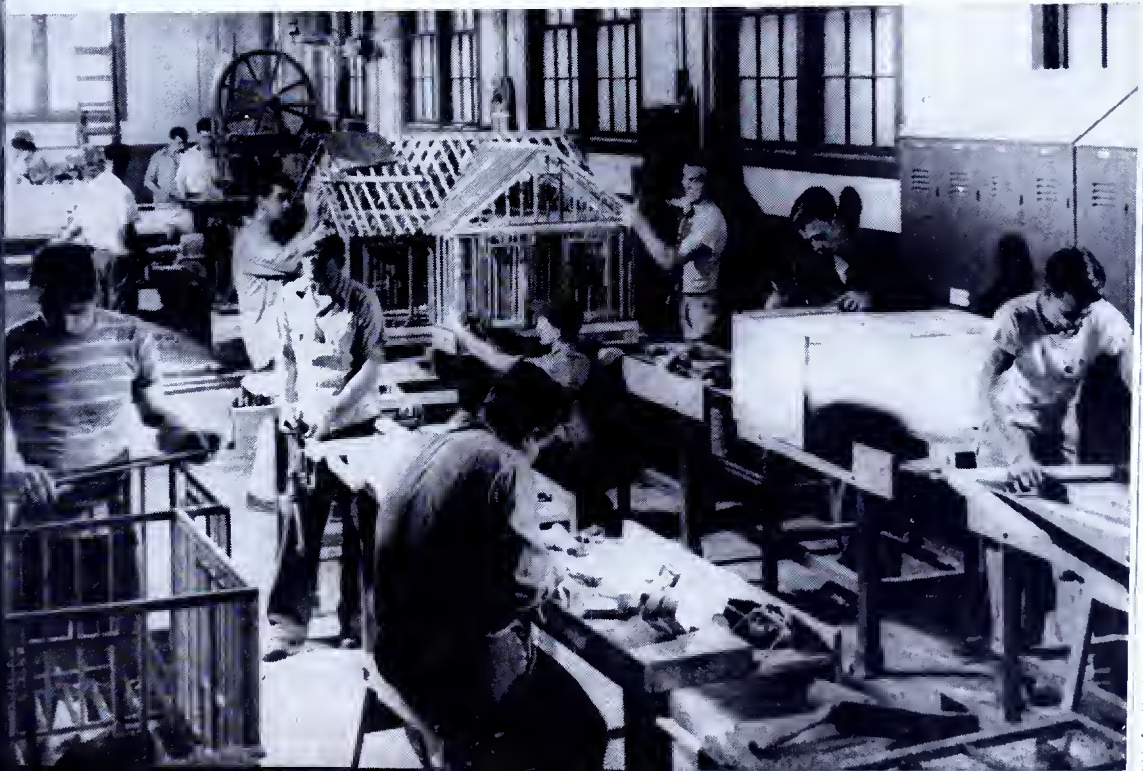
Rooms for general use are now characteristic of all modern school plants. Table II, Appendix, Page 68, shows the number of schools having this type of room and the pupil capacity of such rooms. Since the general use rooms are necessary to a complete educational program, their absence in a school is conspicuous. Of the 1550 secondary and combined secondary and elementary school buildings (see Table 3, page 11), 637 are without libraries; 957 are without gymnasiums; 995 lack auditoriums; 1117 are without cafeterias; 1486 are without multi-purpose rooms; 1530 lack community rooms; and 942 lack medical suites.

It is encouraging to note, however, that reports indicate a variety of activities are being provided for in new elementary school construction through the inclusion of multi-purpose rooms.



SCHOOL FACILITIES SHOULD PROVIDE FOR LEARNING THROUGH ACTIVIT

LEARNING THROUGH ACTIVITIES (Continued)



Other Types of Special Facilities

The development of school transportation has influenced the construction of district-owned bus garages; 132 of such buildings are now in use. There are 72 administrative office buildings, and approximately the same number of warehouses and maintenance shops, mostly in the larger cities. As larger administrative units develop in Pennsylvania it is likely that buildings of this character will increase in number.

6.

SERVICE SYSTEMS

Modern school buildings now have service systems of various types designed for the health, safety, and comfort of pupils. These include adequate heating and ventilation, artificial lighting, running water, indoor toilets, sewage disposal, and washing facilities. Table IV, Appendix, page 70, points out vividly a serious lack of these facilities in the 7,461 elementary and secondary schools of the Commonwealth. About three out of five school buildings have central heat. Mechanical ventilation is provided in almost one-third of the schools. Electric lighting is generally available, although it is interesting to note that nearly seven thousand pupils in 206 schools are without the benefits of artificial lighting.

As to water service, about two out of three school buildings have pressure systems. Of the remaining third of the buildings, 885 elementary buildings have hand-operated water pumps and 1,744 buildings accommodating 76,000 pupils, mostly elementary, have no water available on the school grounds. This means that for these children there are no washing facilities, outdoor privies are characteristic, and drinking water, if available at all, must be carried.

As to toilet facilities, over half of the school buildings have indoor water-flush toilets. While these are provided in nearly all secondary schools, only about half of the elementary schools have such facilities, the remaining half having outdoor privies.

Sewage disposal facilities with municipal connections are available in about one out of three school buildings. About twenty-four per cent of all school buildings have septic tanks of different types. However, it is deplorable to note that two out of five school buildings involving nearly 150,000 pupils, mostly elementary, have no disposal systems of any sort.

Washing Facilities

Sewage disposal is one factor in promoting school sanitation. Of great importance also is the availability of water in promoting the habit of cleanliness. About one out of three schools provide hot and cold running water for their pupils, and an additional twenty per cent provide cold water only. Showers for general pupil use are provided in about half of the secondary schools. However, over one-third of all school buildings, involving 126,734 pupils, mostly elementary, have no fixed washing facilities. This situation should be remedied as soon as possible.

7.

RATINGS OF SCHOOL PLANTS

Having analyzed the school plants, school buildings, and facilities of the public schools, let us consider the combined ratings of these school facilities. Three groups of ratings will be used: (1) S—plants sufficiently satisfactory to continue in service for 20 or more years; (2) F—plants which by rehabilitation and remodeling could continue to serve for educational purposes for 10 to 15 years; and (3) U—unsatisfactory plants which should be abandoned as soon as possible. Distribution of these ratings is shown in Table 11, page 36, and Table IX, Appendix, page 74. See also Chart G, page 37, and Chart H, page 38.

Table 11 shows that, of 6,855 school plants in Pennsylvania, one out of three (33.4 per cent) is rated as S; one out of six (16.6 per cent) as F; and one out of two as U. Considering each group, out of 5,642 elementary school plants, only 27.3 per cent are S, 14.2 per cent F, and more than half (58.5 per cent) U. This means that more than half of the elementary school plants in Pennsylvania are rated as unsatisfactory. As the great majority are one- and two-room buildings, it is gratifying to note that they are being rapidly replaced. The secondary school buildings, generally, are in a far better physical condition. Two out of three are rated S, and only 8.0 per cent as U. The combined elementary-secondary buildings (7.8 per cent of the total) are rated slightly lower than the secondary buildings with about one in two rated S, and one in eight rated U.

TABLE 11

Rating of Publicly Owned School Plants

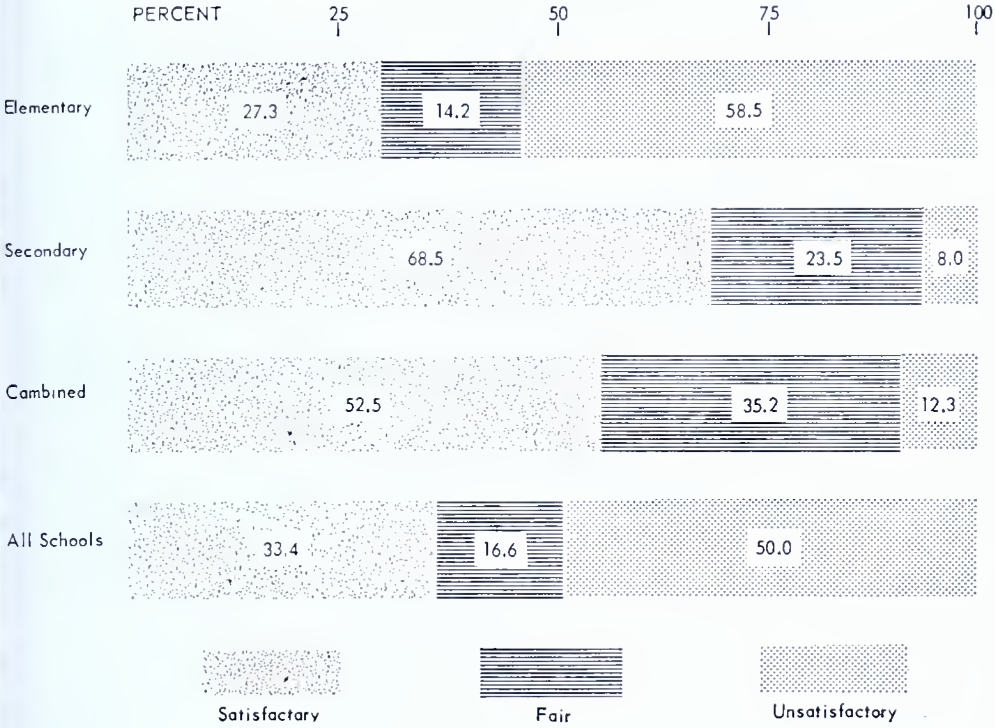
	S	F	U	Total
Elementary				
Number	1,541	801	3,300	5,642
Pupils	480,994	168,138	192,343	841,475
Per cent Plants	—	—	—	82.2
Per cent Pupils	—	—	—	55.6
Secondary				
Number	469	161	55	685
Pupils	343,575	82,132	19,556	445,263
Per cent Plants	—	—	—	10.0
Per cent Pupils	—	—	—	29.4
Combined				
Number	277	186	65	528
Pupils	125,828	76,037	25,030	226,895
Per cent Plants	—	—	—	7.8
Per cent Pupils	—	—	—	15.0
Total				
Number	2,287	1,148	3,420	6,855
Pupils	950,397	326,307	236,929	1,513,633
Per cent of School Plants by Ratings				
Elementary	27.3	14.2	58.5	100
Secondary	68.5	23.5	8.0	100
Combined	52.5	35.2	12.3	100
Total	33.4	16.6	50.0	100
Per cent of Pupils Housed by Ratings				
Elementary	57.2	20.0	22.8	100
Secondary	77.2	18.4	4.4	100
Combined	55.5	33.5	11.0	100
Total	62.8	21.6	15.6	100

Pupils Accommodated

From the standpoint of pupils accommodated, the outlook is somewhat more promising. Table 11 points out that two out of three (62.8 per cent) pupils in Pennsylvania are housed in plants rated as S. About one in five (21.6 per cent) are housed in plants rated as F, and about one in six pupils (15.6 per cent) in plants rated as unsatisfactory. It should be forcibly pointed out that 236,929 boys and girls are going to school daily in school plants in Pennsylvania rated as unsatisfactory and unsafe. This is a condition which merits the immediate attention of everyone interested in the educational welfare of our boys and girls, the citizens of tomorrow. Most of the children in

CHART G

PER CENT OF SCHOOL PLANTS RATED SATISFACTORY, FAIR, AND UNSATISFACTORY



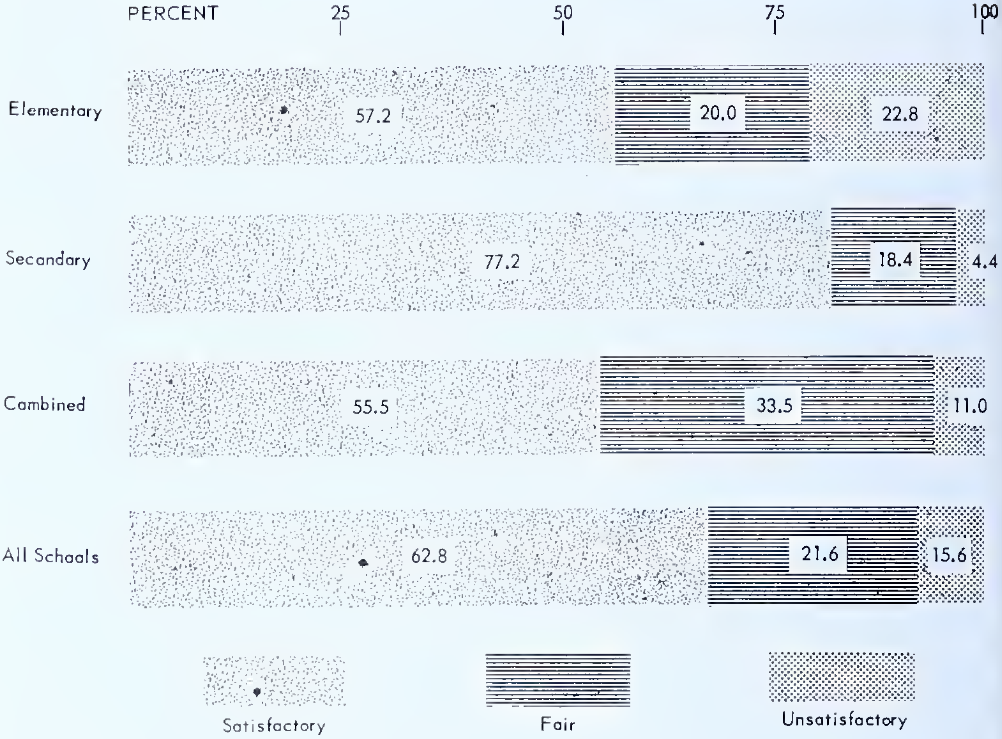
unsatisfactory school buildings are elementary pupils, secondary pupils having by far the greater advantages in this respect.

Distribution of Defective and Unsatisfactory School Buildings (See Table 12, page 39, and Chart I, page 40.)

It has been pointed out that an "unsatisfactory" school plant is one which should be abandoned and replaced as soon as possible. Such plants cannot be made satisfactory because of one or more of the following deficiencies: (1) structurally unsafe, (2) noncorrective fire hazard, (3) very poorly located with respect to school population and school organization, (4) completely inadequate site which cannot be enlarged, (5) unsatisfactory and hazardous environment, and (6) completely obsolete as to educational adequacy. In addition to these defects, school plants may have been rated "unsatisfactory" because

CHART H

Per Cent of Pupils Housed in Satisfactory, Fair, and Unsatisfactory School Plants



they were lacking artificial lighting, water-flush toilets, or central heat. Many of these school plants are either temporary makeshifts or superannuated structures which have long since served their period of usefulness and have now become obsolete.

Table 12 opposite points out, in order, these defects by the types of school plants and the number of plants affected. Ranking first as to defects is the number of school plants that are completely obsolete as to educational adequacy. (See Chart I on page 40.) These 2,783 structures represent approximately 41 per cent of the total school plants in Pennsylvania. However, it should be noted

TABLE 12

Number of Unsatisfactory Plants Having Defects as Shown

	Number of Plants Having Such Defect				
	Elementary		*Secondary*	*Combined*	*Total*
	1- and 2-rm.	*All others*			
1. Completely obsolete for a modern educational program	2,281	388	55	59	2,783
2. Completely inadequate site; cannot be enlarged	1,275	346	51	61	1,733
3. Poorly located as to pupil population and school organization	1,110	207	30	31	1,378
4. Noncorrective fire hazard	891	283	30	47	1,251
5. Unsatisfactory and hazardous environment	899	227	32	42	1.200
6. Structurally unsafe	450	166	17	24	657

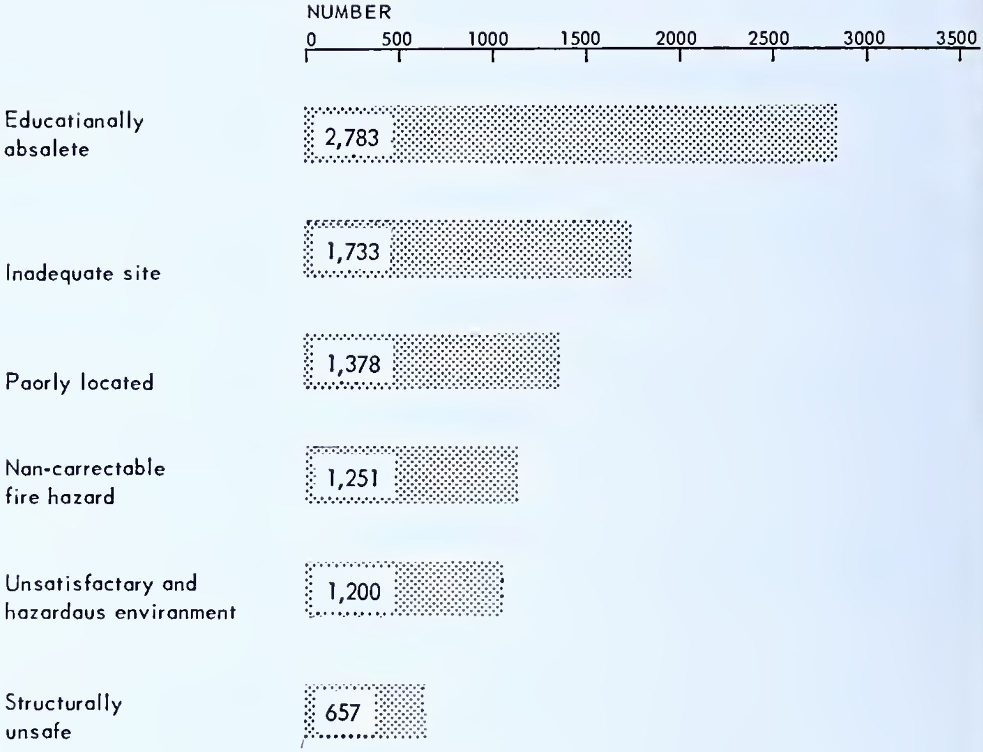
that 2,281 of these obsolete 2,783 plants are one- or two-room schools. The educational inadequacy of one- and two-room schools has long been recognized. Aside from the unadaptability of such buildings to modern education these buildings show many other defects as noted in the table.

Second in rank as to the number of plants affected are those 1,733 plants having completely inadequate school sites which cannot be enlarged. Omitting the one- and two-room schools from the tabulation, about 5 per cent or 360 plants are rated unsatisfactory because they are a noncorrective fire hazard. Plants that have such defects as an unsatisfactory and hazardous environment, that are poorly located as to school population and school organization, and that are structurally unsafe rank fourth, fifth, and sixth, respectively.

It should be pointed out that more than one defect, perhaps several, may appear in the same school plant thus creating, in that instance, a more serious situation. Table IX, Appendix, page 74, specifies the number of unsatisfactory plants by the number of defects per plant.

CHART I

Number of Unsatisfactory School Plants Having Defects as Shown



8.

USE OF SUBSTANDARD OR NONPUBLICLY OWNED FACILITIES

Over the years many facilities, which are classified either as substandard or located in nonpublicly owned quarters, have been utilized for school purposes. Table XI, Appendix, page 76, points out the following types: (1) in rented quarters outside of school buildings, (2) in structures not designed for permanent school use, (3) in makeshift quarters in buildings designed for permanent school use, and (4) in school plants which should be abandoned. Nearly 3,800 school plants, housing 268,125 pupils, are involved.

buildings are typical of the
substandard structures hous-
68,125 pupils throughout Pennsylvania.

,256 pupils are housed in
"temporary" structures →

← 14,674 pupils are housed in
rented quarters

pupils are housed in con-
and makeshift buildings →

← 236,929 pupils are housed in
school buildings which should be
abandoned

9.

TRANSPORTATION OF PUPILS

Development

Public school pupil transportation has been recognized as a State obligation for more than half a century. As early as 1901, the General Assembly made it mandatory upon some school boards to furnish transportation at public expense. In 1919, legislation was passed providing for State participation in the cost of locally furnished pupil transportation. As a result, both the number of pupils transported and the cost of transportation have increased. During the 1937-38 school year, 161,300 pupils were transported at a total cost of $3,154,000. By 1950-51, the number had increased to 394,237, and transportation costs to $12,543,000. Of the latter amount, $9,446,000, or 75.3 per cent, was paid by the Commonwealth.[1]

Public school transportation has been included in this study because the anticipated purchase of district-owned equipment is a measure of capital outlay need. Pupils are transported by common carriers, contract carriers, and district-owned vehicles. The Joint State Government Commission, in its Report to the General Assembly, 1953 Session, found that, "In the use of publicly owned pupil transportation equipment, Pennsylvania ranks low when compared with other states . . . Experience in other states indicates that publicly owned pupil transportation systems tend to be more economical than contract transportation." This would seem to point the way toward an increasing change from contract to district-owned school buses.

Present Status

The development of a modern school program of sufficient size and scope requires that those children living beyond legal walking distance will need to be transported. As one-teacher schools are replaced by consolidated schools, transportation has become more and more necessary. Table V, Appendix, page 71, points out that there are now 1,802 local administrative units (71.4 per cent) transporting pupils at public expense. These school districts transport 436,197 pupils daily, about 27.1 per cent of all school pupils in Pennsylvania. Approximately three-fourths of the children transported (73.4%) are carried in privately owned or common carrier buses, whereas about one-fourth (26.6%) are transported in district-owned buses. There are, in addition, 22 school buses used exclusively for transporting pupils for athletics, field trips, and similar purposes. The present value of all school-owned buses in operation is estimated to be $3,180,050, an average value of $3251.58 per bus.[1]

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[1] *Public School Pupil Transportation.* A Report of the Joint State Government Commission to the General Assembly of the Commonwealth of Pennsylvania. Session of 1953, p. 19.

Age and Capacity of School-Owned Buses

Of the school-owned buses, three out of ten are two years of age or less, and a like number from two to four years old. The number of buses in each age group then steadily declines until the age of ten years is reached, when it is found that one out of ten buses is still in operation. The median age of all buses is about 4½ years. About half of all school-owned buses have a capacity of 60 pupils or over; 29.1 per cent, 48 pupils; and 15.7 per cent, 54 pupils. A negligible number (about one in thirteen) have a capacity of 42 and under.

School Buses Needed

The Survey disclosed that many administrative units were contemplating additional transportation services as soon as a change to publicly owned buses could be made. A total of 489 such units reported a definite need for new buses by the fall of 1952 (Table XVII, Appendix, page 81). When secured, these vehicles will be used to replace obsolete equipment, extend and improve school services, accommodate new consolidations, provide for increased enrollments, and convert from private contract and common carriers to publicly owned transportation. The total number of new buses needed was estimated at 1,129, more than half of which (53%) would be needed to convert from contract to publicly owned equipment. The cost of these buses was estimated at $6,373,200, or an average of $5,645.00 per bus.

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[1] Consult *Public School Pupil Transportation,* A Report of the Joint State Government Commission (1953), for a more complete analysis of pupil transportation in Pennsylvania.

Part 2

Meeting School Facilities Needs

In Part I, attention has been directed to the inventory of school facilities as they now exist. The information collected has been analyzed carefully and reveals conditions which challenge laymen and educators alike. A large percentage of existing school structures need to be replaced; others are in a poor state of repair. Many buildings are no longer adequate to house modern educational programs. A general lag in construction has caused overcrowding and use of substandard facilities. The reorganization of schools and administrative units and the expansion of educational offerings have been delayed by lack of proper facilities. This is the situation at the completion of the inventory.

In Part II, an attempt is made to predict school needs based upon school population trends as revealed by census and related data. In estimating the number of classrooms necessary to house these incoming pupils, it must be remembered that other facilities, as well, will be needed. Sites which are adequate and adapted to the various uses of the modern school also must be considered of major importance in the expanding program. And, above and beyond all of these vitally important factors, serious consideration must be given to the resources that are available upon which to build a solid, defensible educational program that will develop in the children of today the initiative and leadership that will be demanded of them tomorrow.

1.

FACTORS THAT INFLUENCE SCHOOL FACILITIES NEEDS

The Population

During the past three decades school housing needs have developed more rapidly than new facilities could be provided. Factors contributing to this situation have been: (1) the depression years that curtailed school plant construction, (2) the Second World War which seriously limited other than essential construction, and (3) the declining school enrollments of the middle and late forties. Following World War II, the birth rate increased rapidly. The large influx of

TABLE 13

Total Population and Pupils Enrolled In and Attending Public Elementary and Secondary Schools In the United States and In Pennsylvania by Decades From 1910-1950, Inclusive

	1910	*1920*		*1930*		*1940*		*1950*	
Item	*Number of Persons*	*Number of Persons*	*Per cent of Increase or Decrease (for 1910)*	*Number of Persons*	*Per cent of Increase or Decrease (for 1920)*	*Number of Persons*	*Per cent of Increase or Decrease (for 1930)*	*Number of Persons*	*Per cent of Increase or Decrease (for 1940)*
UNITED STATES									
Total Population	91,972,266	105,710,620	+14.9	122,775,046	+16.1	131,891,632	+7.4	150,697,361	+14.3
Pupils Enrolled	17.813,852	21,578,316	+21.1	25,678,015	+19.0	25,433,542	—1.0	25,111,433	— 1.3
Pupils In Average Daily Attendance	12,827,307	16,150,035	+25.9	21,264,886	+31.7	22,042,151	+3.7	22,288,985	+ 1.1
PENNSYLVANIA									
Total Population	7,665,111	8,720,017	+13.8	9,631,350	+10.5	9,900,180	+2.8	10,498,012	+ 6.0
Pupils Enrolled	1,286,273	1,590,758	+23.7	1,902,373	+19.6	1.855.530	—2.5	1,558,602	—16.0
Pupils In Average Daily Attendance	1,028,290	1,249,531	+21.5	1,640,294	+31.3	1,668,001	+1.7	1,408,425	—15.6

Note: The estimated number of pupils in the public schools of Pennsylvania in 1960 is 2,071,600, an increase of 32.9 per cent.

new pupils in the schools beginning about 1949 and the stringent limitations in financing school plant construction have combined to create a wide gap between school plant needs and provision for adequate school facilities.

Table 13 shows that the population of Pennsylvania increased six per cent in 1950 over 1940. This increase in population is reflected in rising school enrollments in the public schools beginning in 1949, where the increase in total school enrollments over the previous year was 14,500 pupils (see Table 14). Enrollments have risen gradually

TABLE 14

ACTUAL ENROLLMENT IN THE PUBLIC SCHOOLS OF PENNSYLVANIA
1940-1952 AND ESTIMATES FOR 1953-1960
ALSO
PERCENTAGES BASED ON 1952 ENROLLMENTS

Year Ending	*Kindergarten*	*%*	*Elementary*	*%*	*Secondary*	*%*	*Total*	*%*
940*	35,006	45.0	1.119.459	118.6	701,065	121.7	1.855.530	116.1
941	34,617	44.5	1,088,591	115.3	690,047	119.8	1.813.255	113.5
942	34,034	43.8	1,039,748	110.2	664,919	115.5	1,738,701	108.8
943	35,676	45.9	1,000,785	106.0	626,359	108.8	1,662,820	104.1
944	35,755	46.0	962,227	101.9	575,325	99.9	1.573.307	98.5
945	35,720	45.9	939,376	99.5	564,584	98.0	1.539.680	96.4
946	40,748	52.4	917,348	97.2	563,117	97.8	1.521.213	95.2
947	47,644	61.3	914,047	96.8	568,765	98.8	1.530.456	95.8
948	55,070	70.8	907,100	96.1	561,097	97.4	1.523.267	95.4
1949	60,316	77.5	919,856	97.5	557,089	96.7	1.537.261	96.3
1950	58,464	75.2	940,538	99.6	559,600	97.2	1,558.602	97.6
1951	61,005	78.4	948,789	100.5	568,094	98.7	1.577.888	98.8
1952	77,785	100.0	943,917	100.0	575,846	100.0	1.597.548	100.0
1953**	76,802***	98.7	1,014,000	107.4	596,000	103.5	1.686.802	105.6
1954	72,634	93.4	1,068,000	113.1	609,000	105.8	1,749,634	109.5
1955	70,868	91.1	1,101,000	116.6	637,000	110.6	1.808.868	113.2
1956	72,123	92.7	1.135,000	120.2	661,000	114.8	1.868.123	117.0
1957	75,870	97.5	1,164,000	123.3	705.000	122.4	1,944.870	121.7
1958	75,455	97.0	1,212,000	128.4	727,000	126.2	2,014,455	126.1
1959	71,148	91.5	1,228,000	130.1	758.000	131.6	2.057.148	128.8
1960	67,600	86.9	1,225,000	129.8	779,000	135.3	2,071,600	129.7

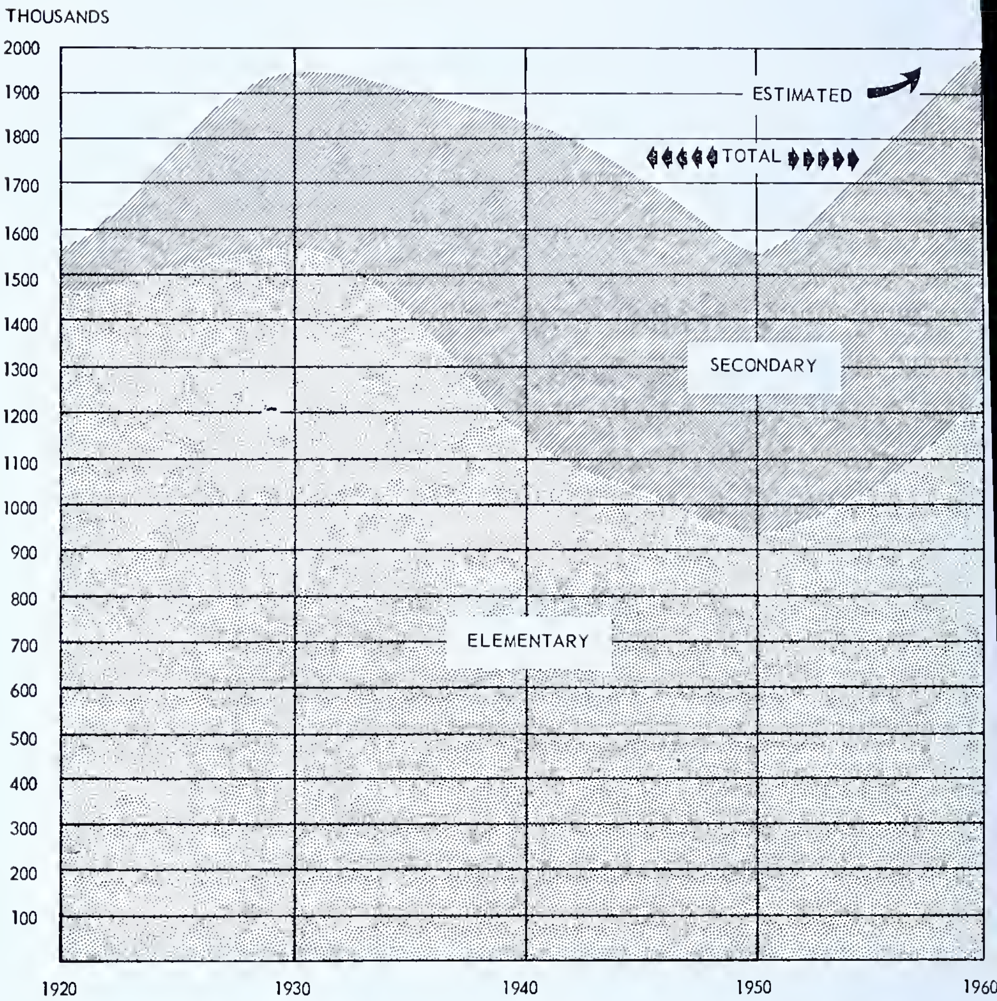
* Actual Enrollments.

** Estimated Enrollments, Division of Child Accounting and Research, Department of Public Instruction.

*** Kindergarten estimates were derived on the recent ratio of children born and attending kindergarten four and five years later. Therefore, they could be carried beyond the nearest thousand.

CHART J

Enrollment in Public Schools 1920-1960



Sources: Statistical Report of the Superintendent of Public Instruction for the school year ending July 2, 1950, Bulletin 73, Department of Public Instruction, and additional information from the Division of Child Accounting and Research.

each year since 1949, as will be noted in Table 14. These rising enrollments, characteristic of the nation as a whole, will continue until about 1959 or 1960. (See Chart J, above).

Predicted Enrollments

It is with anticipated rising enrollments and the need for additional school facilities that we are here concerned. The Division of Child Accounting, Department of Public Instruction, has made predictions of school enrollments to 1960, which are shown in Table 14. The table indicates approximate increases in total enrollments averaging about four per cent annually, with an anticipated total enrollment of 2,071,600 by that year. A distribution is indicated for both elementary and secondary pupils, with a slightly greater average increase for the secondary group. The table also shows anticipated enrollments for kindergarten pupils which are included in the grand totals.

Classrooms Needed (See Table 15 and Chart K, page 50.)

In computing the number of new classrooms needed to house enrollment increases in Pennsylvania, the following distinctions have been made: (1) Those classrooms needed *now* to relieve overcrowding, to house current enrollment increases, and to replace the obsolete buildings which were reported in the inventory in Part I and which are recapitulated below; and

(2) Those additional classrooms needed up to 1960 to provide for increasing enrollments to that date which were not included in the inventory.

The following summary abstracted from Table XV, Appendix, page 80, will give some indication of the current need for new classrooms according to elementary, secondary, or combined use.

New Classrooms	*Elem.*	*Sec.*	*Comb'd*	*Total*	*Per Cent*
Needed to relieve overcrowding	1289	2170	846	4305	27.9
Needed to house enrollment increase	1106	1228	389	2723	17.6
Needed to replace obsolete buildings	5258	1919	1250	8427	54.5
Total	7653	5317	2485	15455	—
Per cent	49.5	34.4	16.1	—	100.0

The summary points out definitely the need for new classrooms now. Of the estimated 15,455 classrooms needed in this group, 27.9 per cent are to relieve overcrowding, 17.6 per cent to house enrollment increases to September, 1952, and more than half (54.5 per cent) to replace classrooms in obsolete buildings. Of this total, about half are needed in elementary school buildings, 34.4 per cent in secondary

TABLE 15

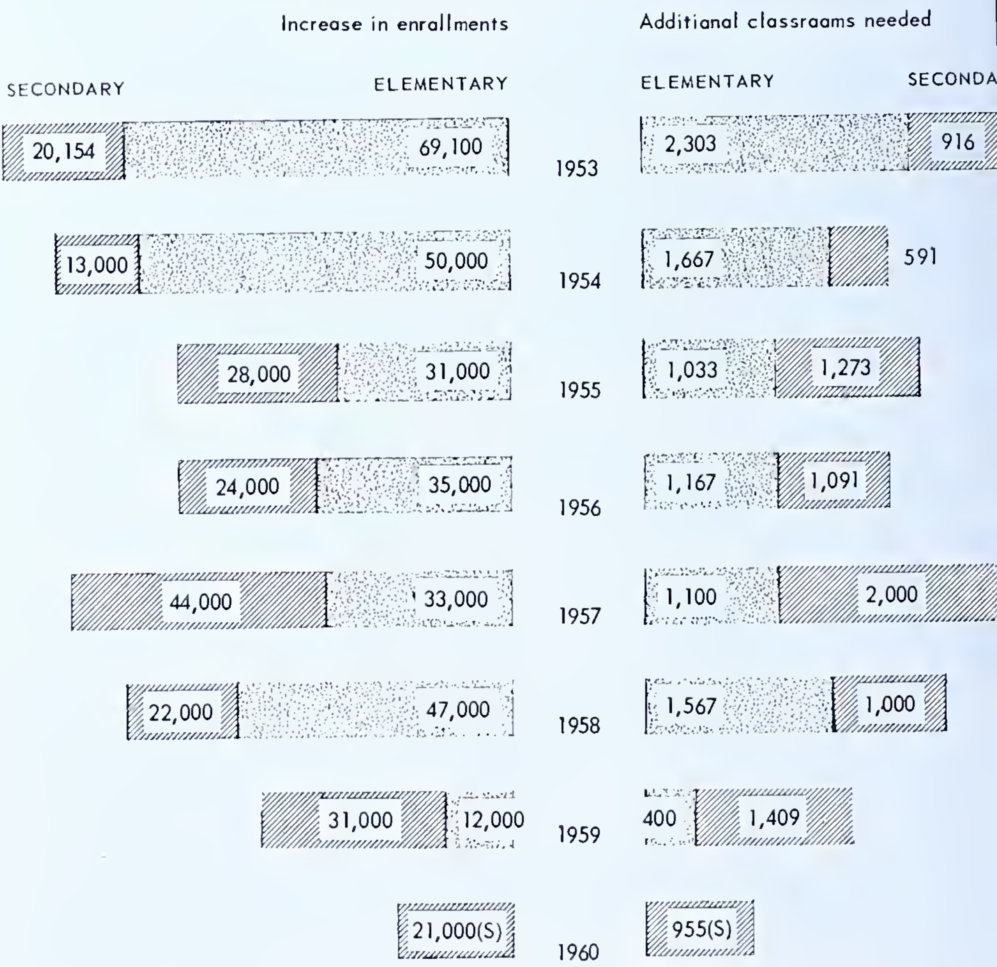
Estimated Increase in Enrollment Over Previous Years and Number of Classrooms Needed

Year Ending	Increase in Enrollment Over Previous Years (To the nearest thousand)			Estimated Increase in Classroom		
	Elementary	*Secondary*	*Total*	*Elementary*	*Secondary*	*Tot*
1954	50,000	13,000	63,000	1,667	591	2,25
1955	31,000	28,000	59,000	1,033	1,273	2,30
1956	35,000	24,000	59,000	1,167	1,091	2.25
1957	33,000	44,000	77,000	1,100	2,000	3,10
1958	47,000	22,000	69,000	1,567	1,000	2,56
1959	12,000	31,000	43,000	400	1,409	1,80
1960	6,000	21,000	15,000	—	955	95
Total	202,000*	183,000	385,000	6.934	8.319	15.25

* Net

CHART K

Estimated Increase in Enrollments (1954-1960) with Estimated Additional Classrooms Needed



school buildings, and 16.1 per cent in combined elementary and secondary buildings. A total of 422,811 pupils are concerned in these estimates.

Because of an increased birthrate over the past decade, and the resulting increase in enrollment, additional classrooms will be needed. (See Table 15, and Chart K on page 50). An attempt will be made to estimate these needs for the years 1953 to 1960. This estimate will be based on the result obtained by dividing the expected increase in elementary pupils by 30, and by dividing the anticipated increase in secondary pupils by 22. It is recognized that this measure may be open to question particularly at the secondary level, since the use of 22 pupils per classroom may result in an over-estimate of the number of regular instruction rooms. However, it is believed that this over-estimate is more than compensated for in that no consideration is given here to the need for specialized facilities.

On this basis, there will be needed in Pennsylvania by 1960 a total of 6,934 additional elementary classrooms and 8,319 additional secondary classrooms, a grand total of 15,253.

Effects of Educational Change on School Building Needs

In designing a desirable school building, it is most important that it be specifically planned to fit the particular needs of the pupils in that community. This means that consideration must be given to: (1) the nature of the instructional program to be offered, (2) the educational objectives to be achieved, (3) the type of school organization planned, such as K-6, 1-12, 7-12, etc., (4) the adaptability of the plant to changing needs and conditions, (5) the special service features to be provided, such as guidance quarters, lunchroom facilities, etc., and (6) the uses the community may wish to make of the facilities.

As school districts are reorganized, poor facilities abandoned or absorbed, and a modern educational system developed, opportunity is thereby provided to develop a program which is peculiar to each community and which extends adequate educational opportunity to all pupils. Such a program not only should provide educational advantages from the kindergarten through the junior and senior high schools but also offer subject matter sufficiently comprehensive to meet the varied needs of all pupils. There should be provision in the school plant, for example, for health and medical facilities, kinde gartens, laboratories, shops, homemaking, food service, exception children, and for numerous activities suited to the multiple interes of children. The modern school should become a true communit school, immersed in the life and activities of the community and all the people in the community. The facilities of the school pla should be available to all citizens for purposes and activities co cerned with better living.

Live Births

In predicting school facilities needs over the years, the number live births should be given careful consideration, since provision mus be made for these children as they progress through the schools. child born in 1950, for instance, will normally enter the first grade i 1956. If, however, a kindergarten is available, he will enter the scho in 1955. As a pupil normally requires twelve years to complete th

TABLE 16

Births and Birth Rates in United States and in Pennsylvania, 1940-1954

	Number Live Births—United States	*Number Per 1000 of General Population*	*Number Live Births—Pennsylvania*	*Number Per 1000 of Genera Populatio*
1940	2,558,000	19.4	164,850	16.7
1941	2,701,000	20.3	174,193	17.6
1942	2,988,000	22.2	197,177	19.8
1943	3,102,000	22.7	199,927	19.8
1944	2,938,000	21.2	178,412	17.6
1945	2,858,000	20.4	173,360	17.0
1946	3,411,000	24.1	219,094	21.4
1947	3,818,000	26.6	249,103	24.2
1948	3,638,000	24.9	227,282	21.9
1949	3,650,000	24.6	224,510	21.6
1950	3,628,000	24.0	221,177	21.1
1951	3,833,000	25.0	235,319	22.2
1952	———	—	240,514	22.5
1953	———	—	235,000*	—
1954	———	—	232,000*	—

* Estimated

Sources: National Office of Vital Statistics, Federal Security Agency, Washingto D. C., and Division of Child Accounting and Research, Pennsylvania Departme of Public Instruction, and Bureau of Vital Statistics, Pennsylvania Department Health.

educational program, provision must be made for these children year by year. Predictions of enrollment based on live births should also take into consideration additions and eliminations due to many causes. Table 16 (opposite page) shows births and the birth rates of the United States and of Pennsylvania for 1940-51, with predictions to 1954 for Pennsylvania. Predictions of birth rates are hazardous, due to many circumstances. It is estimated, however, that the elementary school population of Pennsylvania will "level off" and remain relatively stable beginning about 1959. However, this statement does not apply evenly throughout the State, as statistics show that there are many fluctuations in the birth rate by cities, ethnic groups, and unusual conditions, such as war, mobility, and economic changes.

MEETING THE SCHOOL FACILITIES NEEDS

It has been pointed out that there has been a significant lag in the provision for both new school facilities and replacements and rehabilitations in Pennsylvania in recent years, due to many factors. This section will indicate the progress in meeting current needs.

Recent Construction

Comparatively little progress was made in new school building construction and major additions from 1945 to March, 1951. Table VI, Appendix, page 71, indicates that 123 such units were constructed during that period, of which 105 (85.4 per cent) were elementary and 13 were secondary. This school construction provided 1,323 additional classrooms, with a total pupil capacity of 41,256 (74 per cent elementary), and a net increase of 26,845 pupils, taking into consideration abandonment and replacement. In addition to new construction, 736 school buildings were rehabilitated during the same period, of which 553 were elementary, 101 secondary, and 82 combined. Nearly 112,000 pupils were affected by these improvements, about one-half of them elementary pupils. A total of $35,400,500 was spent in these improvements. These data point out the modest beginnings in school plant construction during the period.

Buildings and Major Additions Under Construction

March, 1951, data show that 80 school buildings and major additions were under construction in Pennsylvania, of which 47 were elementary, 19 secondary, and 14 combined. These buildings will hav a total pupil capacity of nearly 25,000 pupils, with a net increase i pupil capacity because of replacements, of 18,367, and when completed, will add 885 new classrooms, about 55 per cent of them for th use of elementary pupils. See Table VII, Appendix, page 72.

It is interesting to note that new school building construction provides many new educational services for these children, especially fo the elementary pupils. Such services include, in order of frequency medical suites, libraries, cafeterias, multi-purpose rooms, gymnasiums auditorium-gymnasiums, and community rooms. In the secondar school, the prevailing added facilities are cafeterias, gymnasiums, an medical suites.

Costs

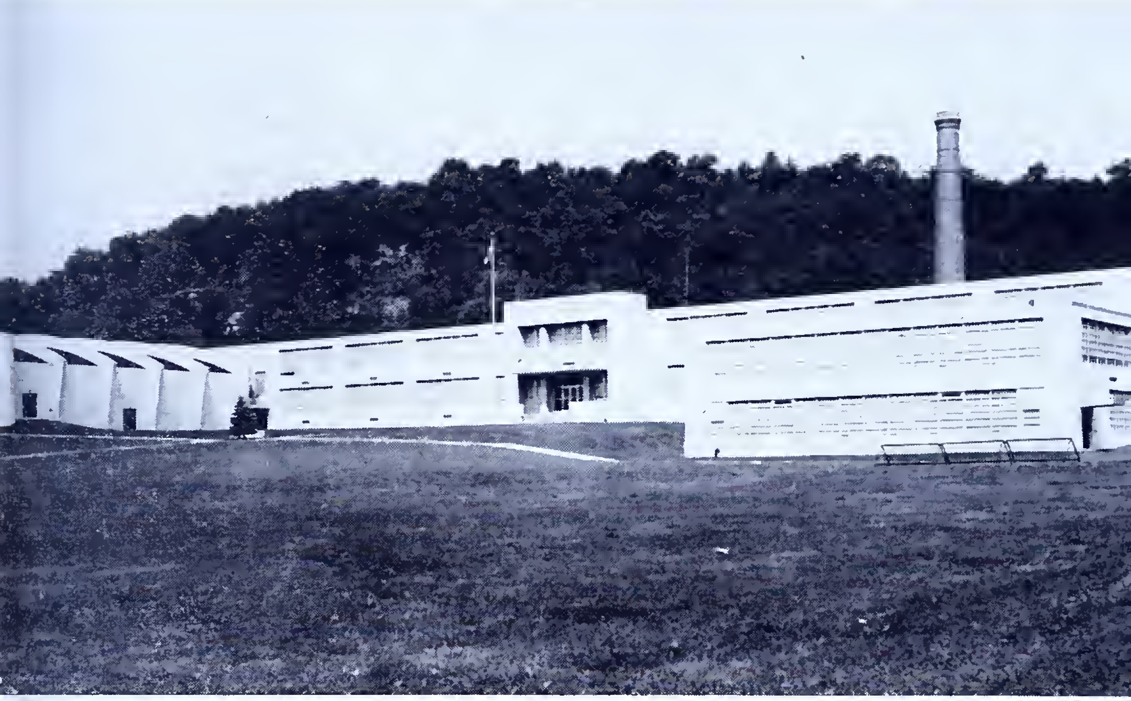
Some estimates of the present cost of school facilities can be ascertained from Table 17, page 58, which compares the cost of plants completed between 1945 and March, 1951, and those under constructio since that date. Of the 123 school plants constructed prior to 1951, th total cost was $50,950,000, an average of $414,227.64 per school plan and $980.56 per pupil. Data concerning 33 school plants under construction since 1951 point out that these average costs had soared t $696,878.79 per school plant and $1,652.56 per pupil. The distribution of each dollar since 1945 shows that 89.6 cents was spent for the building, 3.6 cents for the site, and 6.8 cents for the equipment and furniture.

Rehabilitation and Remodeling

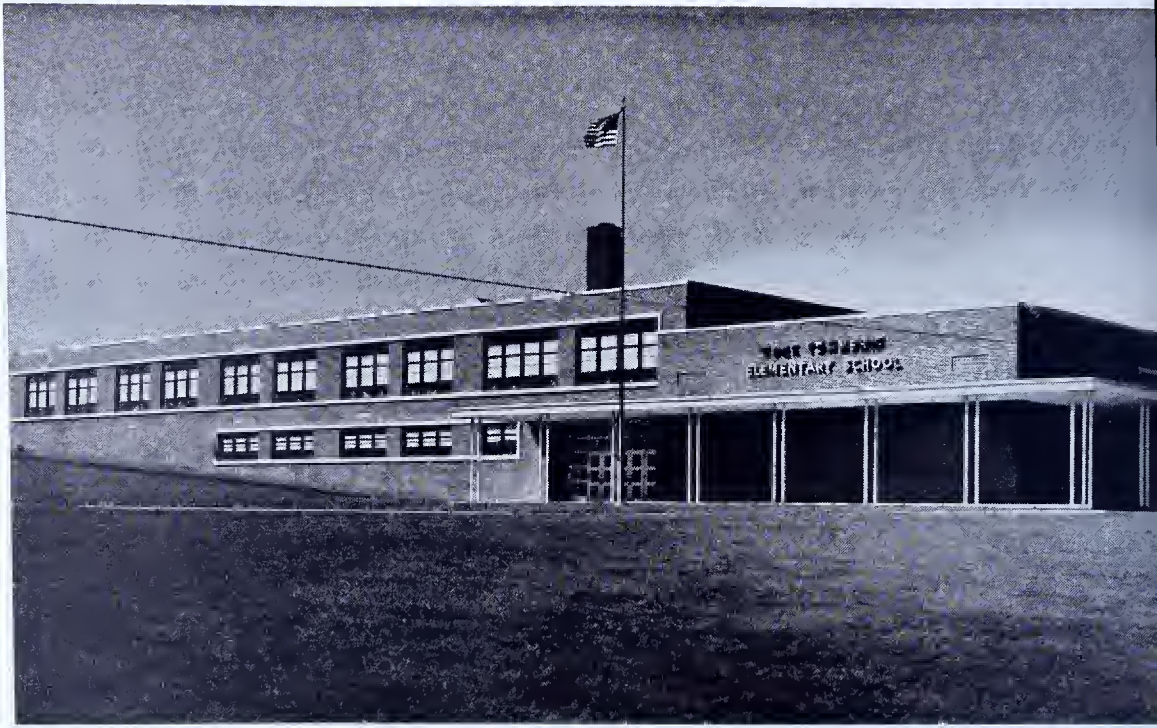
Some estimates of the cost of rehabilitation and remodeling of school buildings are available (see Table XIV, Appendix, page 79). These estimates apply to the improvement of facilities now being used, and to improvements necessary to make unused facilities usable. The total estimated costs reported are over forty million dollars. It should be pointed out that these estimates apply only to those buildings which will serve usefully for another ten years. They do not apply to buildings which are obsolete and should be abandoned.

New Construction (See illustrations, pages 55, 56, and 57.)

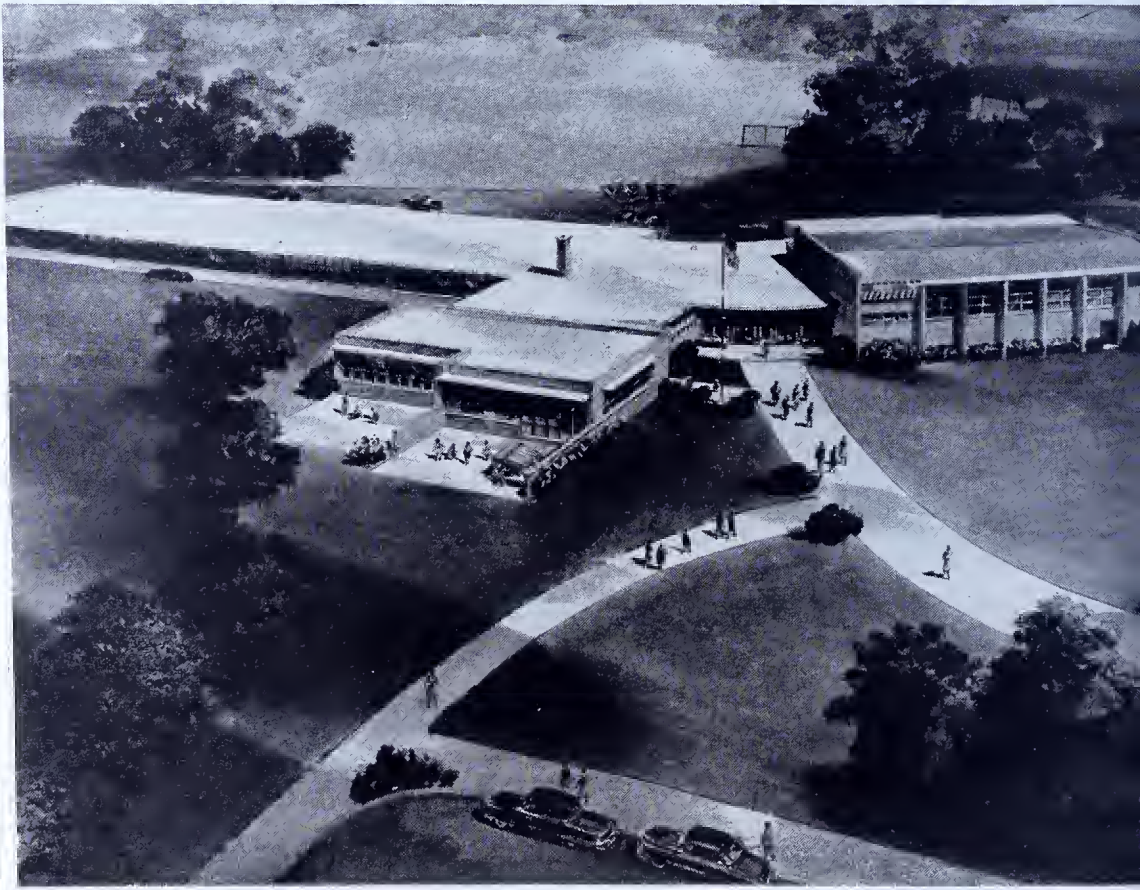
Estimates have been made of new construction needs (Table XV, Appendix, page 80). For new classrooms, to relieve overcrowding, to

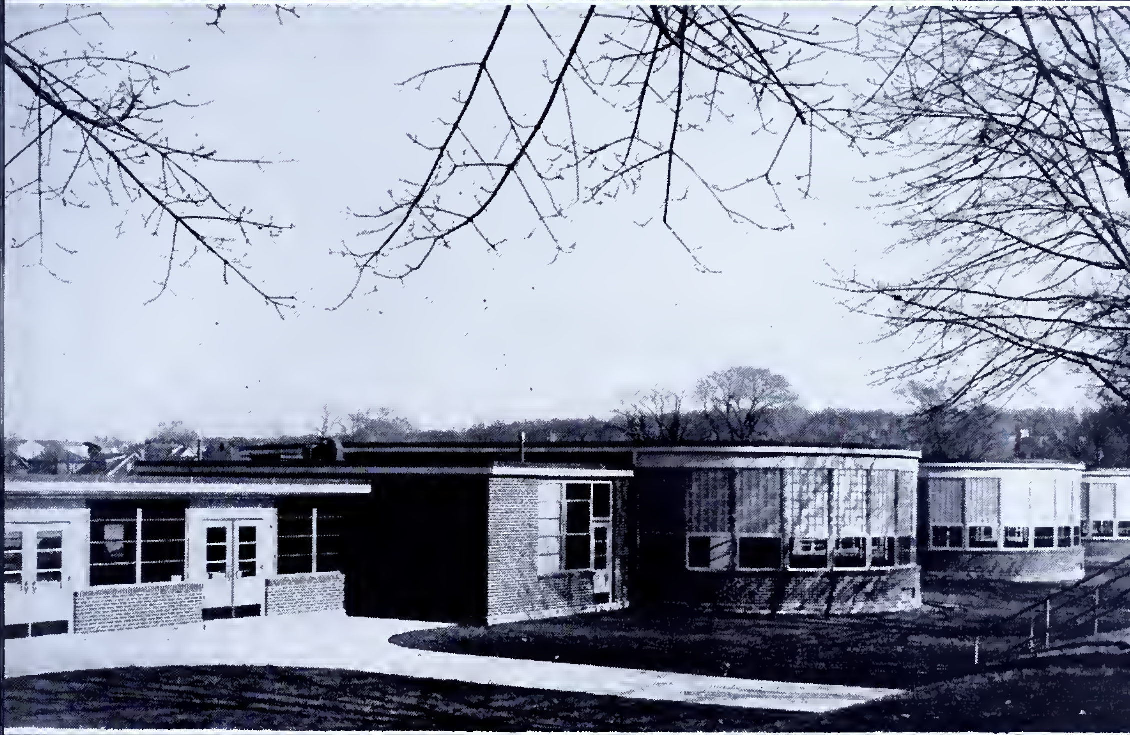


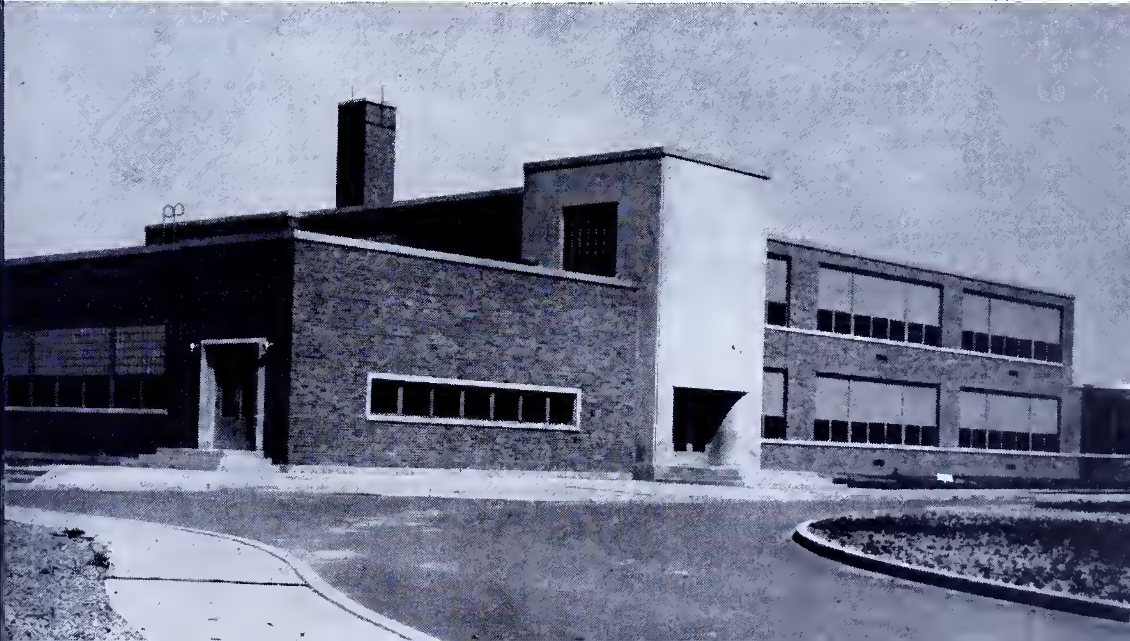
MODERN SECONDARY SCHOOL BUILDINGS MEET A VARIETY OF SCHOOL AND COMMUNITY NEEDS



MODERN ELEMENTARY SCHOOLS SHOULD BE BOTH FUNCTIONAL AND ATTRA







house school enrollment increases, and to replace obsolete building the grand total estimated is $534,011,000. Added to this estimate $70,481,500 for needed additions to existing buildings other th classrooms. This makes a grand total of $604,492,500. However, this expenditure is included a grand total of 15,455 classrooms, f 422,811 pupils. The estimates of the total cost are distributed as fo lows: elementary 44.4 per cent, secondary 41.5 per cent, and combine 14.1 per cent.

TABLE 17

(See Table VIII, Appendix, page 73.)

CONSTRUCTION OF SCHOOL FACILITIES IN PENNSYLVANIA SINCE 1945

Type of School	*Under Construction March, 1951*	*Constructed Since 1945 and Occupied by March, 1951*	*Total*
Elementary			
Number of Plants	25	105	130
Total Plant Cost	$14,562,000	$32,175,000	$46,737,000
Number of Pupils Provided for	9,375	38,099	47,474
Secondary			
Number of Plants	5	13	18
Total Plant Cost	$ 7,475,000	$16,799,000	$24,274,000
Number of Pupils Provided for	3,110	11,425	14,535
Combined			
Number of Plants	3	5	8
Total Plant Cost	$ 960,000	$ 1,976,000	$ 2,936,000
Number of Pupils Provided for	1,431	2,436	3,867
Total			
Number of Plants	33	123	156
Total Plant Cost	$22,997,000	$50,950,000	$73,947,000
Number of Pupils Provided for	13,916	51,960	65,876
Average Cost Per Plant	$ 696,878.79	$ 414,227.64	$ 474,019.
Average Cost Per Pupil	$ 1,652.56	$ 980.56	$ 1,122.
Total Cost Ratios:			
Buildings	91.4	88.8	89.6
Sites	2.9	3.8	3.6
Equipment and Furniture	5.7	7.4	6.8

Site Acquisitions and Improvements (See illustrations, pages and 61.)

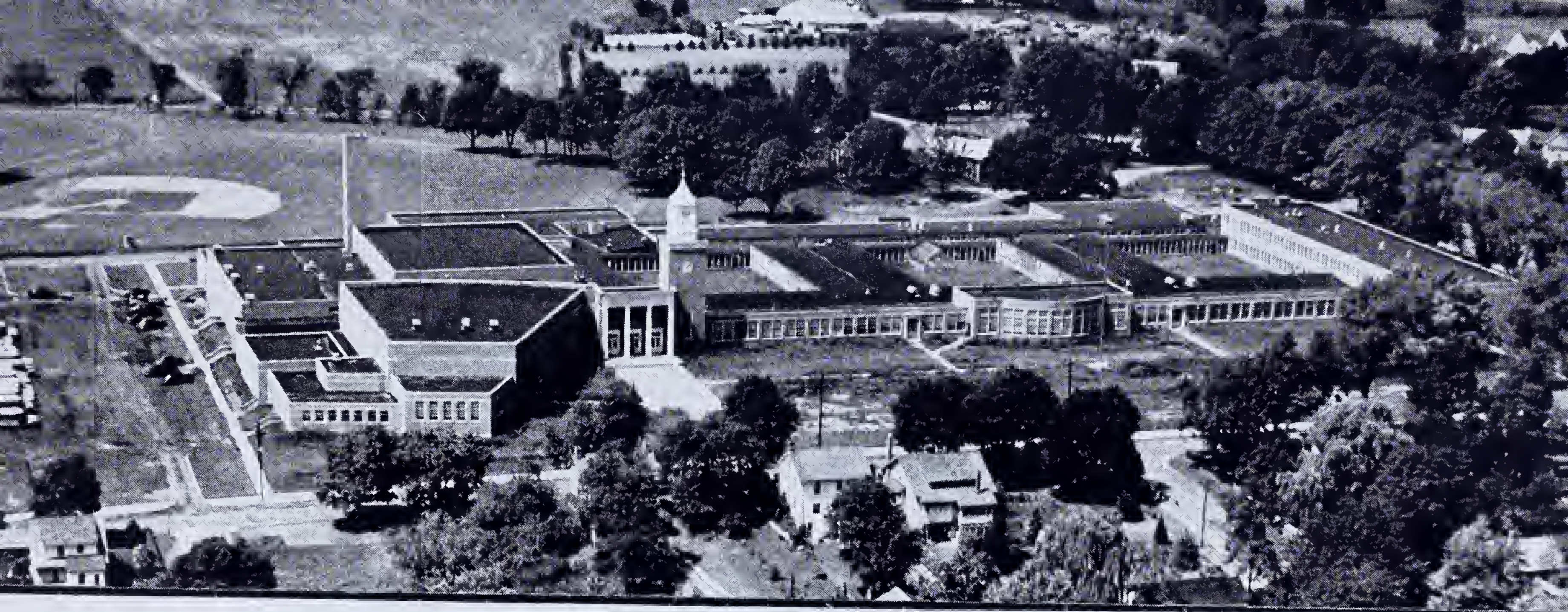
Estimates have been made of the need for site acquisitions and sit improvements as of September, 1952. These estimates are set fort in Table XVI, Appendix, page 81, and include new sites and improvements, enlargement of existing sites, and improvement of existing sites. These estimates total $25.274,000 for a total of 8,752 acres. By far the largest amount is needed for new sites and improvements, with estimates of 49.4 per cent needed for elementary schools, 32.9 per cent for secondary schools, and 17.7 per cent for combined elementary and secondary schools. Adding the recommended amounts for sites, buildings, and equipment, the grand total estimated is $676,588,700. (See Table XVIII, Appendix, page 82).

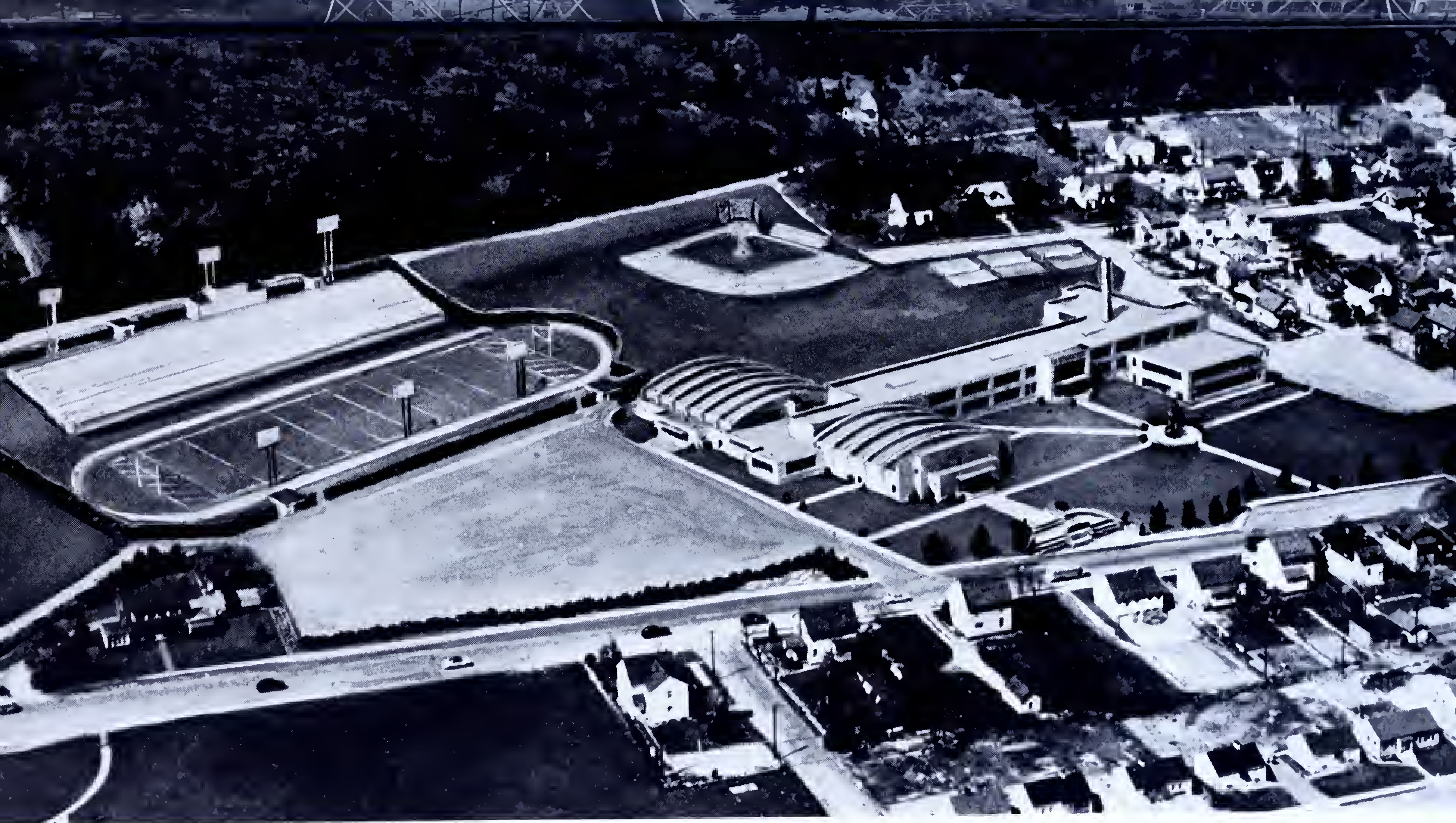
Needs and Resources

In giving consideration to the grand total of estimated school needs, the query which must be answered is, "Does Pennsylvania have the resources necessary to provide these essential facilities?" Table XVIII, Appendix, page 82, offers a partial answer to this question and shows the estimated requirements of the 2,518 school districts in the State.

Because of the constitutional limitation on the borrowing capacity of local school districts, only 45.9 per cent of the estimated cost, or $310,765,000 could be raised by general obligation bonds. Hence, a huge deficit of $365,823,700 (see Table XVIII, Appendix, page 82) will remain, which will have to be met by other methods. This deficit, however, is being overcome, at least in part, by the "authority" method of financing made possible by recent legislation, and by the Commonwealth granting a subsidy to aid the district in paying rental costs to such an authority.

The great range in the estimated true value of taxable property per pupil in all school districts is pointed out in Table XVIII, Appendix, page 82, ranging from $9,579 per pupil in those districts with an enrollment of under 500 to $26,843 in districts over 50,000 but under 100,000. Strangely enough, however, it will be observed in Column 7 of this table that, generally, the larger the school district up to 15,000 in enrollment, the more the community is willing to provide better school facilities by a liberal use of its local borrowing power. There is a great range also in the additional loan capacity when all groups of districts are considered. Most fortunate in this respect, due in large part to the greater concentration of taxable wealth, are those larger school districts which enroll between 15,000 and 25,000 pupils.





ADEQUATE SCHOOL SITES ARE ESSENTIAL TO MODERN EDUCATIONAL PROGRAMS

Part 3

Conclusions

A review of the findings of this survey of school facilities in Pen sylvania should challenge all persons interested in public educatio to put forth their best efforts and to urge needed improvements witl out delay.

1.

The following conclusions result from the data studied:

1—Many of the 7461 school buildings now being used need imm diate modernization or should be replaced.[1] Structures thirty, fort fifty, or even sixty years old are commonplace.

2—A large proportion of these older buildings are constructed o combustible materials and lack many of the facilities and moder improvements which are so essential to good instruction.

3—New facilities are badly needed also to meet the increase i enrollments and to provide a better educational program for the boy and girls. However, while there has been a very definite lag in schoo house construction in the past, there are many hopeful signs tha much is being done to remedy the situation and to plan for the futur

4—The sites of Pennsylvania schools are generally small and i need of enlargement and improvement.

5—By 1960 it is estimated that about 15,000 new classrooms will b needed because of increased school enrollment. The opportunities o pupils to attend school in desirable quarters, as indicated by moder standards, vary widely, with pupils in larger towns and smaller citie having the greater advantages.

6—Fortunately, the number of pupils affected by the denial o educational opportunities, because of half-day sessions or other cu tailment of services resulting from inadequate school housing, i relatively small over the State as a whole. In certain areas of rapi growth, however, this situation has reached serious proportions.

7—Extension of educational opportunity through general use room such as libraries, gymnasiums, and auditoriums, is limited to mor favored districts. Similarly, the availability for pupil use of modern systems such as heating, ventilation, and water service varies widely.

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[1] Some buildings are still in use which were constructed prior to the enactmer of the Free School Act in 1834.

2.

The problem confronting the citizens of Pennsylvania is that of developing a plan of action which will bring about needed educational improvements and produce an educational program of sound proportions. In this development, the following facts should be noted:

1—SCHOOL HOUSING NEEDS HAVE DEVELOPED MORE RAPIDLY IN PENNSYLVANIA THAN NEW FACILITIES HAVE BEEN PROVIDED. Factors contributing to this are the obsolescence and depreciation of school facilities, the retarding effect of the depression years upon new construction, the scarcity of materials during the war period, the reorganization of school districts into larger administrative units, and the impact of rising school enrollments.

2—SCHOOL ENROLLMENTS SHOWED A MARKED INCREASE BEGINNING ABOUT 1949 AND ARE GRADUALLY RISING EACH YEAR. Surveys indicate, however, that these will begin to level off for the elementary schools about 1959. Because of these increased enrollments, it is estimated that an additional 6,934 elementary and 8,319 secondary classrooms will be needed by that time.

3—CHANGING METHODS OF INSTRUCTION, TOGETHER WITH NORMAL EDUCATIONAL PROGRESS, DEMAND THAT BUILDINGS AND ALL OTHER SCHOOL FACILITIES BE ADJUSTED CONSTANTLY TO MEET MODERN EDUCATIONAL STANDARDS. Social conditions, also, especially in rural or the smaller urban areas, require that the school be made adaptable to many uses because of the modern concept that it is the center around which a great deal of the life of the community revolves.

3.

Comparatively little progress was made in new building construction, major additions, and rehabilitation between January, 1945, and March, 1951. An upsurge in new construction has been noted since March, 1951. This upsurge has been stimulated by authority methods of financing and by state reimbursements to districts for rentals to authorities on account of approved construction.

4.

As a part of Phase I of the School Facilities Survey, local scho administrators were asked to estimate the amount of new constructio which would be needed if all pupils were to be adequately housed i satisfactory classrooms—in class groups averaging not more than 3 pupils at the beginning of the 1952-53 school term. These estimate indicate a need of $534,011,000 to relieve overcrowding, to accommodate anticipated increases in school enrollment for the school yea 1952-53, and to replace obsolete buildings.

In addition, $70,481,500 was estimated to be necessary for addition to buildings other than classrooms. When, to these sums, the requirements for school sites and other facilities necessary for a modern educational program are added, the grand total of estimated needs amount to $676,588,700. These estimates do not provide for the more tha 15,000 classrooms which it is estimated will be needed to house th growth in school enrollments foreseen by 1960.

Summary Statement

The foregoing data and estimates indicate a serious building situation and present a challenge to everyone interested in this growing educational and financial problem. It is axiomatic that good schools must consist of good teachers comfortably situated with their pupils in an environment conducive to study. This environment is modified to a great extent by the physical plant; hence, if Pennsylvania is to have an adequate educational program, acceptable physical facilities must be provided. The findings of this Survey are presented, therefore, with full comprehension that this gigantic task will have to be undertaken wholeheartedly and without delay if the goal of an equal educational opportunity for every child in this Commonwealth is to be attained, or even reasonably approached, during the present generation.

Appendix

Basic Tables

TABLE I. GENERAL CHARACTERISTICS OF SCHOOL BUILDINGS

A. Distribution of Classrooms

Distribution by Number of Classrooms[1] *in Plants*	*Elementary*		*Secondary*		*Comb. Elem. & Sec.*		*Total*	
	No. of Buildings	*No. of Pupils*	*No. of Buildings*	*No. of Pupils*	*No. of Buildings*	*No. of Pupils*	*No. of Buildings*	*No. of Pupils*
One classroom	2,223	69,509	—	—	—	—	2,223	69,509
Two or three classrooms	772	49,627	8	885	—	—	780	50,512
4-6 classrooms	918	119,258	31	4.602	20	3,299	969	127,159
7-13 classrooms	1,129	280,712	127	29,943	206	53,604	1,462	364,259
14-20 classrooms	345	144,708	154	64,306	152	63,316	651	272,330
More than 20 classrooms	255	177,661	365	345,527	150	106,676	770	629,864

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[1] Including recitation rooms, laboratories, and shops.

TABLE I, *Concluded*

B. TYPES OF CONSTRUCTION AND NUMBER OF STORIES

Type of Construction	*Number of Stories*[1]							
	One		*Two*		*Three or More*		*Totals*	
	No. of Bldgs.	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*
Fire-resistive								
Elementary	356	62,154	424	132.264	192	121,519	972	315.937
Secondary	60	13.529	173	96.954	192	205.623	425	316.106
Combination ...	34	9,228	90	42.271	45	30.706	169	82.205
Semi-Fire Res.								
Elementary	1,023	73,360	653	147.303	172	42.047	1,848	262.710
Secondary	61	13.062	150	57.394	72	42.835	283	113.291
Combination ...	56	13,560	158	58,369	52	26,489	266	98.418
Combustible								
Elementary	2,130	97.728	475	87.755	91	35,946	2.696	221.429
Secondary	50	6.217	81	16.180	15	5.392	146	27.789
Combination ...	34	5,237	93	25.284	11	3,661	138	34.182
Mixed								
Elementary	212	15,595	132	33,860	51	25,978	395	75.433
Secondary	6	1,491	25	8.399	15	15,542	46	25.432
Combination ...	16	5,316	50	21.399	11	7,402	77	34,117
Totals								
Elementary	3,721	248.837	1,684	401,182	506	225,490	5,911	875.509
Secondary	177	34.299	429	178,927	294	269,392	900	482,618
Combination ...	140	33.341	391	147,323	119	68,258	650	248,922
Grand Totals	4.038	316,477	2.504	727.432	919	563,140	7,461	1,607,049

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[1] The number of stories in the highest portion of the building.

Types of Facilities	Elementary			Secondary			Comb. Elem. & Sec.			Total		
	No. of Schools Having:	No. of Such Rooms	Pupil Capacity	No. of Schools Having:	No. of Such Rooms	Pupil Capacity	No. of Schools Having:	No. of Such Rooms	Pupil Capacity	No. of Schools Having:	No. of Such Rooms	Pupil Capacity
1. *Types of Special Instruction Rooms*[1]												
Kindergarten	893	1,051	26,391	—	—	—	86	100	2,524	979	1,151	28,915
Science Laboratories	11	12	320	587	1,325	31,005	338	408	9,905	936	1,745	41,230
Industrial Arts or Vocational Shops	132	163	2,539	548	1,538	28,374	333	425	7,236	1,013	2,126	38,149
Homemaking	103	134	2,815	554	1,251	21,837	336	453	7,927	993	1,838	32,579
Music	291	332	11,468	404	554	24,215	188	222	7,850	883	1,108	43,533
Art	187	237	6,057	402	641	16,487	151	167	4,060	740	1,045	26,604
Business Education	3	3	90	499	1,255	31,679	250	362	7,979	752	1,620	39,748
Other	299	358	12,705	203	307	10,644	88	123	3,940	590	788	27,289
2. *Types of General Use Rooms*[1]												
Libraries	448	484	12,128	579	588	29,004	334	339	10,448	1,361	1,411	51,580
Gymnasiums	278	355	10,343	451	606	17,116	142	154	3,960	871	1,115	31,419
Auditoriums	335	338	102,096	423	428	331,898	132	133	63,046	890	899	497,040
Aud.-Gyms.	207	208	13,219	166	167	11,844	222	222	8,928	595	597	33,991
Cafeterias	415	427	67,363	296	374	110,009	137	143	22,168	848	944	199,540
Cafetoriums[2]	69	69	12,873	19	24	3,474	31	35	3,929	119	128	20,276
Multi-purpose rms.[3]	170	195	5,185	38	58	1,232	26	38	906	234	291	7,323
Community rooms	66	69	4,413	14	17	1,542	6	9	447	86	95	6,402
Medical suites	639	666	4,174	390	416	3,133	218	228	1,329	1,247	1,310	8,636
Other	178	282	4,833	68	155	1,687	35	55	692	281	492	7,212

3. *Types of General Facilities*	*Number of such facilities by area*			
	Less than 2,000 sq. ft.	*2,000 to 5,000 sq. ft.*	*Over 5,000 sq. ft.*	*Total Number of*
Bus Garages	63	44	25	132
Adm. Office Bldgs.	46	9	17	72
Warehouses	45	15	13	73
Maintenance Shops	53	18	7	78
Other	57	18	33	108

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[1] The columns headed "Pupil Capacity" contain the number of pupils who can be accommodated during one scheduled period. A special room is not considered for any use other than its primary purpose.

[2] Combination cafeteria and auditorium.

[3] The pupil capacity of a multi-purpose room shall be the greatest number of

TABLE III. SCHOOL SITES[1]

	Elementary		Secondary		Comb., Elem. & Sec.		Total	
	No. of Schools	*Total No. of Pupils*	*No. of Schools*	*Total No. of Pupils*	*No. of Schools*	*Total No. of Pupils*	*No. of Schools*	*Total No. of Pupils*
1. Total Area of Sites								
Less than 1 acre	3,259	347,363	179	79,998	127	54,130	3,565	481,491
1-2.9 acres	1,582	282,262	157	118,752	144	58,687	1,883	459,701
3-4.9 acres	419	98,584	92	71,069	78	31,203	589	200,856
5-9.9 acres	269	76,849	114	71,724	102	41,042	485	189,615
10-14.9 acres	79	27,377	71	47,492	47	23,786	197	98,655
15-24.9 acres	21	5,857	40	29,397	21	12,508	82	47,762
25-50 acres	8	2,225	25	19,635	9	5,539	42	27,399
Over 50 acres	5	958	7	7,196	0	0	12	8,154
2. No. of Pupils per Acre of Site								
Less than 10 pupils per acre	138	10,903	16	4,003	12	4,181	166	19,087
10-24.9 pupils per acre	695	32,444	38	13,429	22	6,014	755	51,887
25-49.9 pupils per acre	1,836	117,938	96	46,842	93	34,978	2,025	199,758
50-74.9 pupils per acre	757	88,763	68	33,758	62	22,368	887	144,889
75-99.9 pupils per acre	462	68,973	60	32,348	40	16,210	562	117,531
100-149.9 pupils per acre	578	94,542	62	35,228	69	26,289	709	156,059
150-199.9 pupils per acre	270	67,464	46	24,677	38	14,227	354	106,368
200-250 pupils per acre	230	65,599	46	29,210	41	16,393	317	111,202
Over 250 pupils per acre	676	294,849	253	225,768	151	86,235	1,080	606,852

	Number of Schools (All Types)			
	Less than 50 Pupils Per Acre	*50-99.9 Pupils Per Acre*	*100-250 Pupils Per Acre*	*Over 250 Pupils Per Acre*
3. Area of Site				
Less than 1 acre	1480	648	735	702
1-2.9 acres	751	367	437	328
3-4.9 acres	218	194	137	40
5-9.9 acres	255	162	60	8
10-14.9 acres	129	59	9	0
15-24.9 acres	62	17	2	1
25-50 acres	40	2	0	0
Over 50 acres	11	0	0	1

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[1] In calculating area of site, the gross area of all land used primarily for the respective schools is included.

	Elementary		*Secondary*		*Comb. Elem. & Sec.*		*Total*	
	No. of Bldgs.	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*	*No. of Bldgs.*	*No. of Pupils*
1. Heating								
Central heat	3.052	748,071	837	468,080	602	240.962	4,491	1,457.113
Room heat generator	2,824	119,563	50	8,106	42	5,110	2,916	132,779
Mixed	35	7,875	13	6,432	6	2,850	54	17,157
2. Ventilation								
Mechanical ventilation	1.565	485.055	555	372.570	305	138,939	2,425	996.564
Gravity ducts	382	89,855	56	21,950	66	24,341	504	136,146
Window ventilation only	3.653	232,035	182	34,218	167	40,375	4,002	306,628
Mixed	311	68,564	107	53,880	112	45.267	530	167,711
3. Artificial lighting								
Electric lighting	5,701	868.123	900	482.618	650	248,922	7,251	1,599.663
Gas lighting	4	571	0	0	0	0	4	571
No artificial lighting	206	6,815	0	0	0	0	206	6,815
4. Water service								
Pressure water service	3,340	773.018	875	477.493	617	241,456	4,832	1,491.967
Hand-operated on school grounds	885	39,090	0	0	0	0	885	39,090
No water available on school grounds	1.686	63,401	25	5,125	33	7,466	1.744	75,992
5. Toilets								
Indoor water flush	2.967	744,960	823	470.338	591	237,217	4,381	1.452.515
Indoor, other	143	8,474	4	679	2	451	149	9,604
Outdoor privies	2,711	112.104	10	1,160	12	1,637	2.733	114,901
*No provisions	90	9,971	63	10,441	45	9.617	198	30,029
6. Sewage disposal								
Municipal connections	1.778	537.652	633	403,338	311	140.518	2,722	1,081,509
School-owned disposal (septic tanks)	1,327	213,897	210	68.129	283	96,816	1.820	378.842
No disposal system	2,806	123,960	57	11.150	56	11,588	2,919	146.698
7. Washing facilities								
Hot and cold water in wash basins for pupil use	1,727	519,913	705	422.928	398	168,043	2,830	1.110.884
Cold water only	1.569	248,368	157	50,460	208	70.603	1,934	369,431
Showers for general pupil use	191	81,296	551	401,655	274	136,526	1,016	619,477
No fixed washing facilities	2.615	107.228	38	9.230	44	10.276	2,697	126,734

TABLE V. TRANSPORTATION OF PUPILS

1. Number of local administrative units transporting pupils at public expense: 1.802

2. Number of pupils transported at public expense:

In privately owned or common carrier vehicles	320,129
In school-owned buses	116,068
In jointly owned buses[1]	0
Total number of pupils transported	436,197

3. Number of buses used for purposes exclusive of transporting pupils to school (athletics, field trips, etc.): 22

4. Capacity and age of school-owned buses:

Rated Capacity[2]	*Age in Years*											*Total*
	0 to 1	2	3	4	5	6	7	8	9	10	Over	
24 or less	6	1	3	1	2	1	0	0	0	3	2	19
30	0	0	2	4	0	2	0	0	1	0	0	9
36	0	1	1	4	2	3	0	1	0	0	9	21
42	1	0	1	6	4	3	0	4	0	0	7	26
48	34	38	34	44	58	21	16	11	1	11	17	285
54	19	14	16	15	35	18	12	1	2	1	21	154
60 or over	97	81	71	63	45	14	15	6	4	21	47	464
Total	157	135	128	137	146	62	43	23	8	36	103	978

5. Present value of all school-owned buses: $3,180,050

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[1] Such as school-owned and privately owned chassis.

[2] Rated capacity is based on manufacturer's rating.

TABLE VI. RECENT CONSTRUCTION

(Completed since January, 1945, and occupied prior to March, 1951)

	Elementary	*Secondary*	*Comb. E. & S.*	*Total*
1. New Buildings and Major Additions				
a. Number of such units	105	13	5	123
b. Number of classrooms in these buildings and additions[1]	964	309	50	1.323
c. Total pupil capacity of these units	30,501	9.185	1.570	41.256
d. Net increase in pupil capacity resulting from the construction of these units[2]	18,779	6.946	1,120	26.845
2. Rehabilitating and Remodeling				
a. Number of buildings which were rehabilitated and/or remodeled	553	101	82	736
b. Number of pupils directly benefited by such improvements	57,342	31,665	22,737	111,744
c. Total cost of such improvements	$20,072,500	$13.649.000	$1.679,000	$35.400.500

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[1] Including recitation rooms, laboratories, and shops.

[2] This is the capacity shown in line 1-c less the capacity of publicly owned classrooms abandoned and replaced as a result of the construction of these units.

TABLE VII. BUILDINGS AND MAJOR ADDITIONS UNDER CONSTRUCTION AS OF MARCH, 1951

	Elementary	*Secondary*	*Comb., Elem. & Sec.*	*Total*
1. Buildings and Major Additions				
a. Number under construction	47	19	14	80
b. Total pupil capacity of these units	13,025	8,080	3,420	24,525
c. Net increase in pupil capacity resulting from this construction	8,717	7,630	2,020	18,367
2. Distribution of Buildings and Major Additions Under Construction by Number of Classrooms				
a. One classroom	1	2	0	3
b. Two or three classrooms	5	5	2	12
c. 4-6 classrooms	12	1	5	18
d. 7-13 classrooms	14	2	4	20
e. 14-20 classrooms	5	2	2	9
f. More than 20 classrooms	6	6	1	13
g. Total number of classrooms in these units[1]	485	296	104	885
3. Number of General-Use Rooms in these Buildings and Major Additions				
a. Libraries	21	8	5	34
b. Gymnasiums	7	12	1	20
c. Auditoriums	5	8	2	15
d. Aud-Gyms	12	3	3	18
e. Cafeterias	12	14	4	30
f. Cafetoriums	7	0	0	7
g. Multi-purpose rooms	14	5	3	22
h. Community rooms	4	2	1	7
i. Medical suites	31	11	6	48
j. Other	23	16	10	49
k. Total number of general-use rooms provided by this construction	136	79	35	250

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[1] Including recitation rooms, laboratories, and shops. The totals in line "g" are *not* the totals of the respective columns for Item 2 (lines a-f).

TABLE VIII. ORIGINAL COST OF SCHOOL PLANTS FOR THE PERIODS BETWEEN JAN. 1945, & MARCH 1951, AND PUPILS HOUSED BY PERIODS OF CONSTRUCTION

Type of School	*Constructed during periods indicated*						
	Under Construction as of March, 1951	*Since Jan. 1945 & occupied prior to March, 1951*	*1940 to 1944 incl.*	*1930 to 1939 incl.*	*1920 to 1929 incl.*	*1900 to 1919 incl.*	*Prior to 1900*
1. Elementary							
a. Number of plants	25	105	72	436	784	1,495	2,750
b. Total plant cost	$14,562,000	$32,175,000					
(1) Buildings	13,242,000	28,567,000					
(2) Sites	568,000	1,645,000					
(3) Equip. & furn.	752,000	1,963,000					
c. Number of pupils	9,375	38,099	15,507	107,028	193,141	256,174	231,526
2. Secondary							
a. Number of plants	5	13	19	172	272	166	43
b. Total plant cost	$ 7,475,000	$16,799,000					
(1) Buildings	6,941,000	14,868,000					
(2) Sites	60,000	242,000					
(3) Equip. & furn.	474,000	1,689,000					
c. Number of pupils	3,110	11,425	8,737	105,738	192,003	109,652	17,708
3. Combined Elem. & Sec.							
a. Number of plants	3	5	5	136	174	148	60
b. Total plant cost	$ 960,000	$ 1,976,000					
(1) Buildings	845,000	1,797,000					
(2) Sites	30,000	27,000					
(3) Equip. & furn.	85,000	152,000					
c. Number of pupils	1,431	2,436	2,248	59,190	80,193	61,676	21,152
4. Totals of above							
a. Number of plants	33	123	96	744	1,230	1,809	2,853
b. Total plant cost	$22,997,000	$50,950,000					
(1) Buildings	21,028,000	45,232,000					
(2) Sites	658,000	1,914,000					
(3) Equip. & furn.	1,311,000	3,804,000					
c. Number of pupils	13,916	51,960	26,492	271,956	465,337	427,502	270,386

TABLE IX. RATING OF PUBLICLY OWNED SCHOOL PLANTS

Rating *Classification of School Plants*		*Elementary*		*Secondary*		*Comb., E. & S.*		*Total*	
		No. of Plants	*Pupils*	*No. of Plants*	*Pupils*	*No. of Plants*	*Pupils*	*No. of Plants*	*Pupils*
S Plants sufficiently satisfactory to continue in service for 20 or more years		1,541	480,994	469	343,575	277	125,828	2,287	950,397
F Plants which by rehabilitating and remodeling could continue to serve for 10 to 15 years		801	168,138	161	82,132	186	76,037	1,148	326,307
U Unsatisfactory plants which should be abandoned as soon as possible[1]	Number of defects 1	223	18,899	8	2,275	6	2,184	237	23,358
	2	178	19,994	7	2,322	14	6,620	199	28,936
	3	327	30,357	8	3,299	15	6,058	350	39,714
	4	659	35,069	8	2,848	7	2,974	674	40,891
	5	601	29,552	14	4,934	11	3,811	626	38,297
	6	471	23,273	6	2,591	7	2,394	484	28,258
	7	428	17,783	4	1,287	4	784	436	19,854
	8	218	8,913	0	0	0	0	218	8,913
	9	164	7,002	0	0	0	0	164	7,002
	10	31	1,501	0	0	1	205	32	1,706
Total unsatisfactory		3,300	192,343	55	19,556	65	25,030	3,420	236,929

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[1] Table IX shows in section *U* the number of plants and number of pupils for each type of plant having the indicated number of the following 10 major defects:

(a) structurally unsafe
(b) non-correctible fire hazard
(c) very poorly located with respect to school population and school organization
(d) completely inadequate site which cannot be enlarged
(e) unsatisfactory and hazardous environment
(f) completely obsolete as to educational adequacy
(g) no artificial lighting
(h) without water-flush toilets
(i) without fixed hand-washing facilities
(j) without central heat

For example: the numbers in line 7 of section *U* under "Elementary" mean that there are in use in the State 428 publicly owned elementary school plants with 7 of the above-mentioned 10 major defects, and that these plants house 17,783 elementary pupils.

TABLE X. NUMBER OF PUPILS PER CLASSROOM IN S AND F SCHOOL PLANTS[1]

No. of Pupils per Classroom[2]	*Number of Schools and Classrooms*							
	Elementary		*Secondary*		*Comb., Elem. & Sec.*		*Total*	
	Schools[3]	*Classrooms*[4]	*Schools*[3]	*Classrooms*[4]	*Schools*[3]	*Classrooms*[4]	*Schools*[3]	*Classrooms*[4]
Classrooms not used..	820	2,679	75	341	40	104	935	3,124
Under 20	148	1,438	108	2,507	46	783	302	4,728
21-30	1,110	10,492	336	9,934	262	4,602	1,708	25,028
31-40	1,027	11,846	173	5,260	143	2,684	1,343	19,790
41-50	51	404	11	196	10	154	72	754
Over 50	6	54	2	48	2	14	10	116
Total	2,342	26.913	630	18.286	463	8.341	3,435	53.540

[1] Only those school plants which have been rated as S or F in Table 9 are included.

[2] Including recitation rooms, laboratories, and shops.

[3] Distribution of schools by the average number of pupils per classroom, including each school only once.

[4] Distribution of classrooms by the average number of pupils daily assigned to such rooms. In cases where rooms are used on a multiple-shift schedule because of inadequate space, total pupils for all shifts are counted. For rooms used on a departmental schedule, as in high school, the "average number of pupils" is the total weekly pupil-period load divided by the number of periods the room is used during the week.

TABLE XI. USE OF SUBSTANDARD OR NONPUBLICLY OWNED FACILITIES

	Elementary		*Secondary*		*Comb., Elem. & Sec.*		*Total*	
	No. of Schools[1]	*No. of Pupils*[2]	*No. of Schools*[1]	*No. of Pupils*[2]	*No. of Schools*[1]	*No. of Pupils*[2]	*No. of Schools*[1]	*No. of Pupils*[2]
1. In rented quarters or other facilities outside of school buildings	60	4,658	38	5,263	58	4,753	156	14,674
2. In school-owned barracks buildings or similar structures not designed for school use[3]	11	681	12	1,169	12	1,406	35	3,256
3. In makeshift quarters in buildings designed for permanent school use	90	5,652	55	5,528	63	5,342	208	16,522
4. In school plants which should be abandoned[3]	3,300	192,343	55	19,556	65	25,030	3,420	236,929
5. Total—less duplications	3,450	202,653	148	30,347	186	35,125	3,784	268,125

[1] Number of schools in which at least a portion of the enrollment is housed.

[2] Number of pupils housed in such facilities as of the reporting date.

[3] These plants are among those rated unsatisfactory in Table IX.

TABLE XII. CLASSROOMS DISTRIBUTED ACCORDING TO SIZE AND PUPIL LOAD[1]

Number of Pupils[2] Per Classroom[3]	*Net Classroom[3] Floor Area*						*Total No. of Classrooms*
	Less 400 sq. ft.	*400-600 sq. ft.*	*600-700 sq. ft.*	*700-800 sq. ft.*	*800-900 sq. ft.*	*Over 900 sq. ft.*	
Classrooms not used ...	34	150	1,696	873	243	128	3,124
Under 20	218	344	833	495	304	247	2,441
21-30	344	1,858	6.342	5,653	2,167	1,530	17,894
31-40	110	1,607	9,140	7,079	2,710	2,466	23,112
41-50	19	134	686	506	375	304	2,024
Over 50	2	22	68	37	31	124	284
Total No. of Classrooms	727	4,115	18,765	14,643	5,830	4,799	48.879

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[1] This table includes the classrooms in *all* school plants included in Tables 10 and 11.

[2] Number of pupils in classrooms of these sizes as of the reporting date.

[3] For the purposes of this table only, the term "classroom" *excludes* laboratories and shops.

TABLE XIII. MULTIPLE SESSIONS[1]

1. Triple Sessions				
a. Elementary	No. Schools	0	No. Pupils	0
b. Secondary	No. Schools	0	No. Pupils	0
c. Combined Elementary and Secondary	No. Schools	0	No. Pupils	0
Total	No. Schools	0	No. Pupils	0
2. Double Sessions[2]				
a. Elementary	No. Schools	61	No. Pupils	10,615
b. Secondary	No. Schools	3	No. Pupils	604
c. Combined Elementary and Secondary	No. Schools	15	No. Pupils	3,755
Total	No. Schools	79	No. Pupils	14,974
3. Other Form of Shortened School Day[3]				
a. Elementary	No. Schools	4	No. Pupils	802
b. Secondary	No. Schools	0	No. Pupils	0
c. Combined Elementary and Secondary	No. Schools	1	No. Pupils	300
Total	No. Schools	5	No. Pupils	1,102

4. Estimated number of children who are now being denied educational opportunities by reason of:
   a. An arbitrary increase in school entrance age by reason of overcrowding .... none
   b. Discontinuance of kindergarten and/or nursery school opportunities because of lack of space 33,723

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[1] Total number of pupils now attending school for half-day session or otherwise shortened school day because of lack of building space to accommodate all pupils on a full-day basis.

[2] A half-day kindergarten has not been considered as part of a double session. In cases where morning and afternoon kindergartens are conducted, this practice has not been deemed a double session.

[3] A standard school day may be defined as one during which children receive at least five hours of continuous instruction, either in classrooms or in extracurricular activities, and which shall provide a period for lunch purposes exclusive of the five-hour day.

TABLE XIV. REHABILITATING AND REMODELING

Purpose	*Elementary*			*Secondary*			*Combined Elem. & Sec.*			*Total*		
	Number of Schools	*Net Change in Pupil Capacity*	*Estimated Cost*	*Number of Schools*	*Net Change in Pupil Capacity*	*Estimated Cost*	*Number of Schools*	*Net Change in Pupil Capacity*	*Estimated Cost*	*Number of Schools*	*Net Change in Pupil Capacity*	*Estimated Cost*
1. To improve facilities now being used												
a. Instructional spaces ...	137	8,611	$10,545,000	79	4,631	$11,142,000	59	4,244	$ 3,382,000	275	17,486	$25,069,000
b. Noninstructional spaces	79	—	6,853,000	60	—	4,289,000	33	—	717,000	172	—	11,859,000
2. To make idle facilities usable												
a. Instructional spaces ...	28	2,468	$ 785,000	7	400	$ 206,000	13	560	$ 177,000	48	3,428	$ 1,168,000
b. Noninstructional spaces	110	—	2,098,000	3	—	62,000	7	—	193,000	120	—	2,353,000
3. Total	xx	11,079	$20,281,000	xx	5,031	$15,699,000	xx	4,804	$ 4,469,000	xx	20,914	$40,449,000

TABLE XV. NEW CONSTRUCTION NEEDED BY SEPTEMBER, 1952

Type of School	*No. Adm. Units Involved*	*No. Pupils*	*No. Class-rooms*	*Area in Sq. Ft.*	*Estimated Cost*
1	2	3	4	5	6
1. Elementary					
a. New classrooms[1] needed to:					
(1) Relieve overcrowding	298	38,909	1,289	1,929,000	$ 40,179,000
(2) House enrollment increases	261	33,146	1,106	1,577,000	35,617,000
(3) Replace obsolete buildings	687	152,056	5,258	7,550,000	158,371.000
Total	—	224,111	7,653	11,056,000	234,167,000
b. Needed additions to existing buildings other than classrooms	182	—	—	2,390,000	34,299,500
2. Secondary					
a. New classrooms[1] needed to:					
(1) Relieve overcrowding	178	54,002	2.170	4,370,000	$ 86,798,000
(2) House enrollment increases	142	32,168	1,228	2,636,000	51,870,000
(3) Replace obsolete buildings	115	46,093	1,919	3.830,000	83,139,000
Total	—	132.263	5,317	10,836,000	221,807,000
b. Needed additions to existing buildings other than classrooms	118	—	—	1,668,000	29,171,000
3. Combined, Elementary and Secondary					
a. New classrooms[1] needed to:					
(1) Relieve overcrowding	125	23.644	846	1.345.000	$ 24,667.000
(2) House enrollment increases	90	10,127	389	675,000	12,888.000
(3) Replace obsolete buildings	121	32.666	1.250	1,996,000	40,482.000
Total	—	66,437	2,485	4,016,000	78,037,000
b. Needed additions to existing buildings other than classrooms	60	—	—	350,000	7,011.000
4. Total					
a. New classrooms[1] needed to:					
(1) Relieve overcrowding	—	116,555	4.305	7,644.000	$151,644.000
(2) House enrollment increases	—	75,441	2.723	4.888.000	100,375,000
(3) Replace obsolete buildings	—	230.815	8.427	13,376,000	281.992.000
Total	—	422,811	15.455	25,908,000	534.011,000
b. Needed additions to existing buildings other than classrooms	—	—	—	4,408.000	70,481,500
c. Grand total of 4 a and b	—	422.811	15.455	30.316.000	$604,492,500

[1] Including special instruction rooms.

TABLE XVI. SITE ACQUISITIONS AND IMPROVEMENTS
(Needed by September, 1952)

Type of School	*No. of Adm. Units Involved*	*Acres Needed*	*Estimated Cost*
1. Elementary			
a. New sites and improvements thereto	342	3,644	$ 9,141,000
b. Enlargement of existing sites and improvement of additional land	94	440	2,103,000
c. Improvement of existing sites	111	——	1,245,000
2. Secondary			
a. New sites and improvements thereto	110	3,016	$ 4,734,000
b. Enlargement of existing sites and improvement of additional land	56	352	1,864,000
c. Improvement of existing sites	63	——	1,712,000
3. Combined Elementary and Secondary			
a. New sites and improvements thereto	63	1,088	$ 2,459,000
b. Enlargement of existing sites and improvement of additional land	27	212	1,191,000
c. Improvement of existing sites	48	——	825,000
4. Total			
a. New sites and improvements thereto	—	7,748	$16,334,000
b. Enlargement of existing sites and improvement of additional land	—	1,004	5,158,000
c. Improvement of existing sites	—	——	3,782,000
d. Grand total	—	8,752	$25,274,000

TABLE XVII. SCHOOL BUSES NEEDED
(By September, 1952)

Reason Needed[1]	*No. of Adm. Units*	*No. of New Buses Needed*	*Est. Cost of New Buses*
1. To replace obsolete publicly owned equipment	69	112	$ 757,400
2. To improve and extend service	99	143	885,700
3. To accommodate new consolidations	66	118	626,100
4. To convert from private contract and common carrier to school-owned buses	171	598	3,459,300
5. To accommodate increased enrollments	84	158	644,700
6. Total	489	1,129	$6,373,200

[1] Buses needed were placed under most appropriate single reason. There are no duplications.

(Columns 6, 7, and 8 are based upon data secured by the School Facilities Survey on forms not elsewhere summarized in this bulletin)

By Size of Administrative Unit						*Per Pupil*				
1	2	3	4	5	6	7		8		
						Enrolled		*Involved*		
Enrollment of Local School Adm. Unit	*No. of Units*	*Total Pupils*	*Total Pupils*[1] *Involved*	*Total of Needs*[2]	*Total of Deficits*[3]	*Est. of True Value*[4]	*Present Debt*	*Additional Loan Capacity*[5]	*Annual Cap. Out. Revenue*	*Unobligated Cap. Out. Funds on Hd.*
0-499	1,881	383,406	104.277	$198,389,200	$116,362,200	$ 9,579	$ 28	$ 744	—	$ 43
500-999	367	256.238	106,273	128,977,000	75,361,000	12,463	81	479	—	25
1,000-1,999	186	256,579	102,781	146,545,500	89,407.500	12.794	92	526	—	30
2,000-2,999	41	98.591	33,927	56,085,000	31,544,000	14,244	123	669	—	53
3,000-3,999	15	52,950	15,467	31,263,000	13,950,000	14,038	164	1,100	—	20
4,000-4,999	9	42,084	35,923	19,561,000	7,237,000	19.567	226	327	—	15
5,000-9,999	12	98.365	10,477	15,702,000	1,726.000	20,202	283	3,170	—	151
10,000-14,999	3	37,781	3,991	4,649,000	—	21.538	501	2.542	—	28
15,000-24,999	2	31,315	499	3,916,000	—	16,931	238	20,947	—	30
25.000-49,999	—	—	—	—	—	—	—	—	—	—
50,000-99,000	*1	66,690	14,940	19,448,000	10,389,000	26,843	161	606	—	—
100,000 or more ...	**1	214,986	15,170	52,053,000	19,847.000	18.044	211	2,122	—	—
Total	2,518	1,538,985	443,725	$676,588,700	$365.823,700	$15,311	$127	$ 741	—	$ 33

[1] Total number of pupils reported in Tables XIV and XV, pages 79 and 80.

[2] In column 5 totals are from Tables XIV, XV, XVI and XVII.

[3] Column 6 includes the deficits of only those districts whose needs are greater than their resources. "Resources" are here defined as additional loan capacity plus unobligated funds on hand.

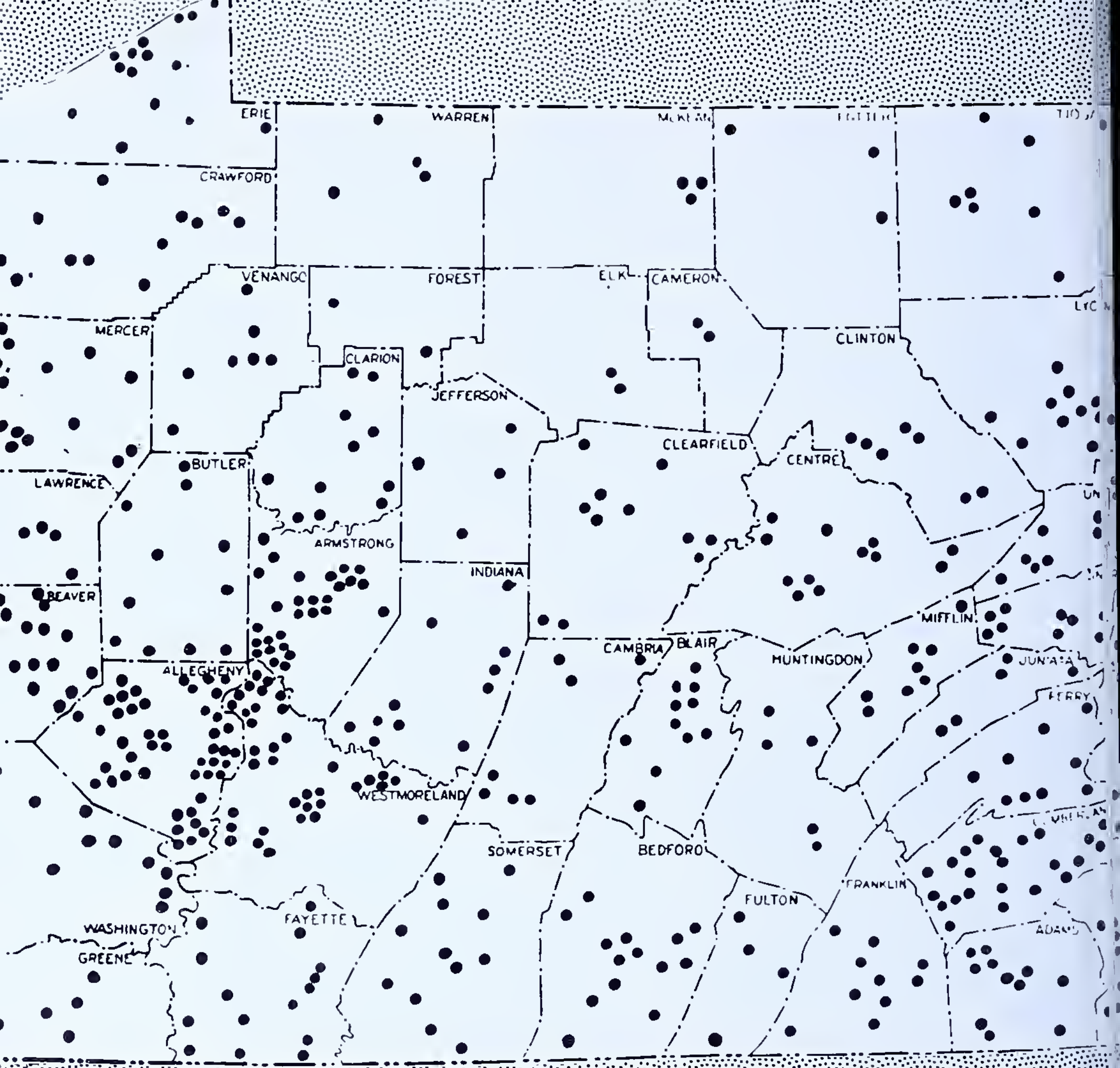
[4] Est. of True Value: Amounts in this column are based on "market value" as established by the State Tax Equalization Board. This is not the same as "assessed valuation" upon which taxes and loan capacity are based.

[5] Additional loan capacity is based upon constitutional limit of 7% of assessed valuation in all districts except Philadelphia and Pittsburgh, where the limit is 2% of assessed valuation.

*Pittsburgh.

** Philadelphia.

NOTES

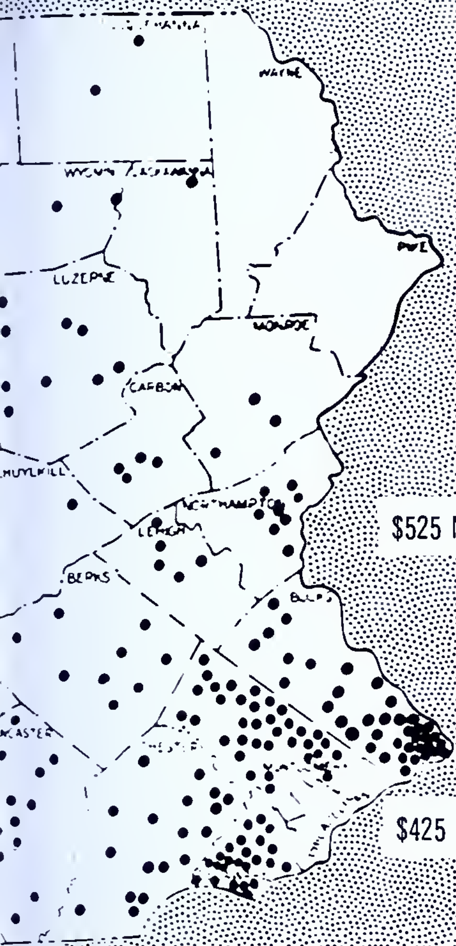


Progress In School Building

The graph to the right indicates Pennsylvania's estimated needs for rehabili
be a total of $670 million as of September, 1952, as revealed in the School

The map above shows the approximate location of construction projects
September, 1953. Before 1955 it is expected that the $425 million limitation o
the Commonwealth will be reached. (See graph.) In the same period add
reach $100 million. (See graph.)

Additional facilities needed to house increasing enrollments from 195
need to $1 billion or more.



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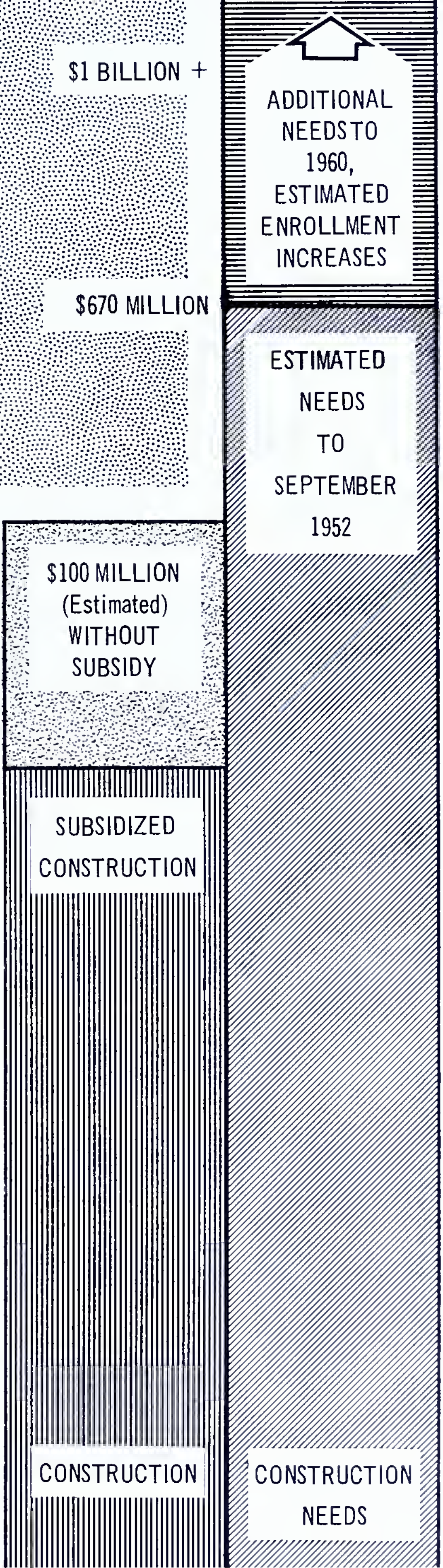
$1 BILLION +
ADDITIONAL NEEDS TO 1960, ESTIMATED ENROLLMENT INCREASES
$670 MILLION
ESTIMATED NEEDS TO SEPTEMBER 1952
$525 MILLION
$100 MILLION (Estimated) WITHOUT SUBSIDY
$425 MILLION
SUBSIDIZED CONSTRUCTION
CONSTRUCTION
CONSTRUCTION NEEDS